Supplementary Material to:
Yi Qing He, Elissa L. Sutcliffe, Karen L. Bunting, Jasmine Li, Katharine J. Goodall, Ivan K.A. Poon, et al. The endoglycosidase heparanase enters the nucleus of T lymphocytes and modulates H3 methylation at actively transcribed genes via the interplay with key chromatin modifying enzymes. Transcription 2012; 3(3); http://dx.doi.org/10.4161/trns.19998;
http://www.landesbioscience.com/journals/transcription/article/19998/

**Figure S1**

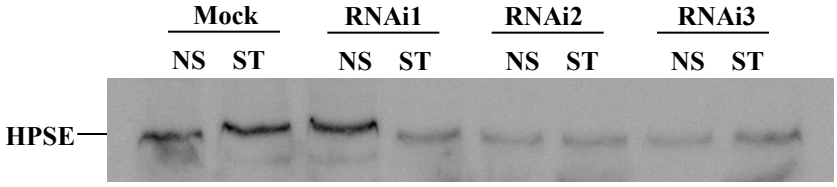


**Figure S1. Heparanase Protein Production is Prevented by Heparanase siRNA Transfection**
Jurkat T cells were transfected with a single heparanase siRNA (RNAi1, RNAi2, and RNAi3) or a negative control siRNA (Mock) (Ambion) at a concentration of 50 nM using Lipofectamine 2000 reagent (Invitrogen) for 2 days and subsequently left untreated (NS) or stimulated with PI for 2 hr (ST). Whole cell protein extracts were made and Western blotting analysis was used to detect heparanase protein in the cells. Minimal heparanase protein could be detected in resting or activated Jurkat cells that had been transfected with the heparanase siRNAs.

**Figure S2**

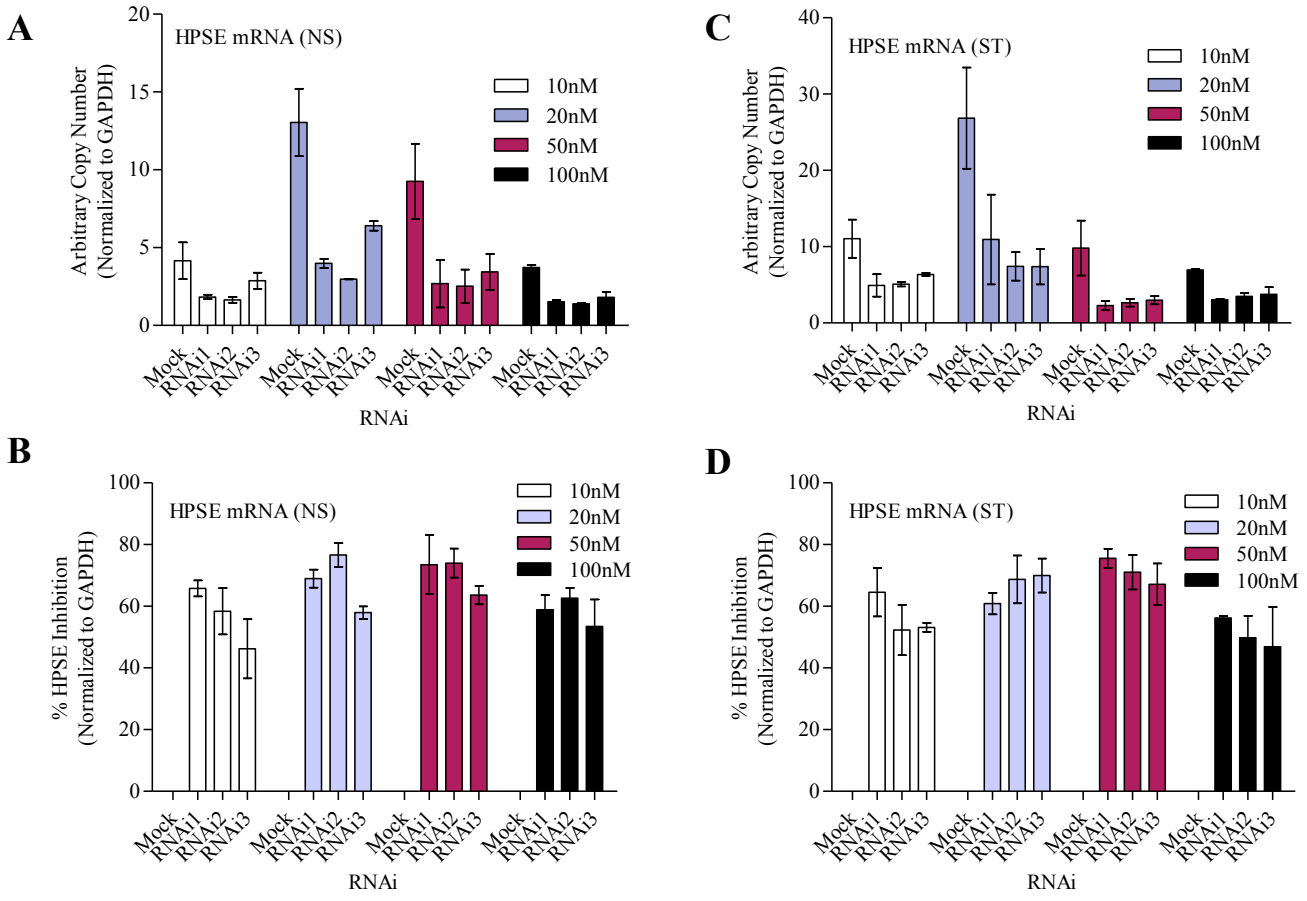


**Figure S2. Heparanase mRNA Production is Reduced by Heparanase siRNA transfection**
Jurkat T cells were transfected with a single heparanase siRNA (RNAi1, RNAi2 or RNAi3) or a combination of the three siRNAs or mock siRNA at different concentrations (10 nM, 20 nM, 30 nM, 50 nM and 100 nM) using Lipofectamine 2000 reagent for 2 days and subsequently left untreated (NS) or stimulated with PI for 2 hr (ST). Total RNA was extracted and Taqman real Time PCR analysis was used to detect the efficiency of heparanase mRNA knockdown by heparanase siRNA transfection. Heparanase cDNA levels were significantly reduced in both resting (A, B) and activated (C, D) Jurkat cells transfected with any of the three heparanase siRNAs. The inhibition efficiency ranged from 57% to 80% (B and D). No significant difference was seen between the three heparanase siRNAs. The heparanase siRNAs were generally effective at all concentrations tested but a concentration of 50 nM was chosen for all subsequent experiments. Data represent the mean ± SE of three independent experiments.

**Figure S3**

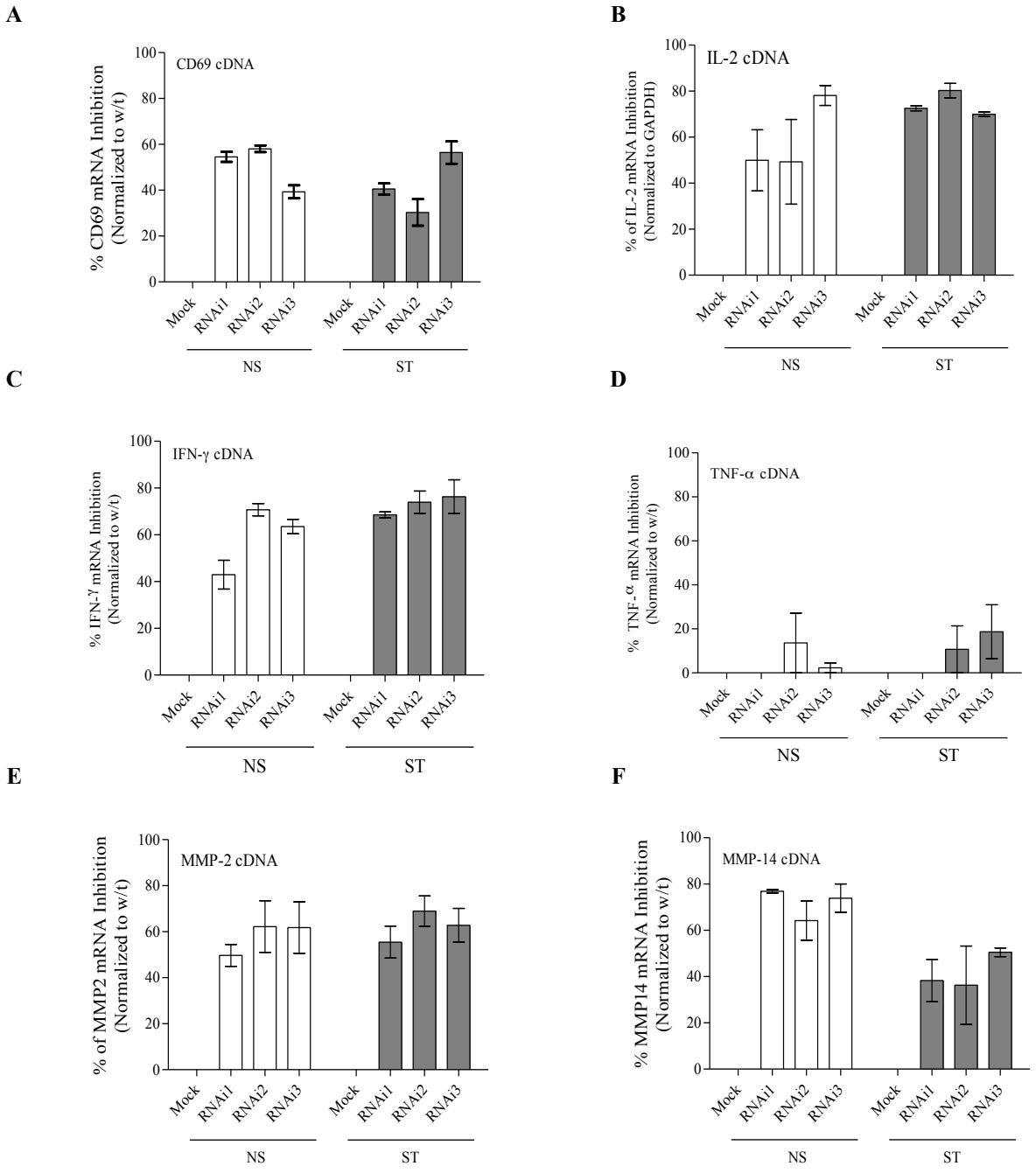


**Figure S3 Heparanase is Essential for Inducible Gene Transcription in T cells**
Jurkat T cells were transfected with validated heparanase siRNAs (RNAi1, RNAi2 and RNAi3) or a negative control siRNA (Mock) using Lipofectamine 2000 reagent (Invitrogen). At 48 hr post-transfection, Jurkat T cells were either left untreated (NS) or stimulated with PI for 2 hr (ST). Total RNA was extracted and TaqMan real-time PCR performed for CD69 **(A)**, IL-2 **(B)**, IFN-γ **(C)**, TNF-α **(D)**, MMP-2 **(E)** and MMP-14 **(F)**. The arbitrary copies were normalised to GAPDH and results plotted as percentage inhibition. Data represent the mean ± SE of three independent experiments.

**Figure S4**

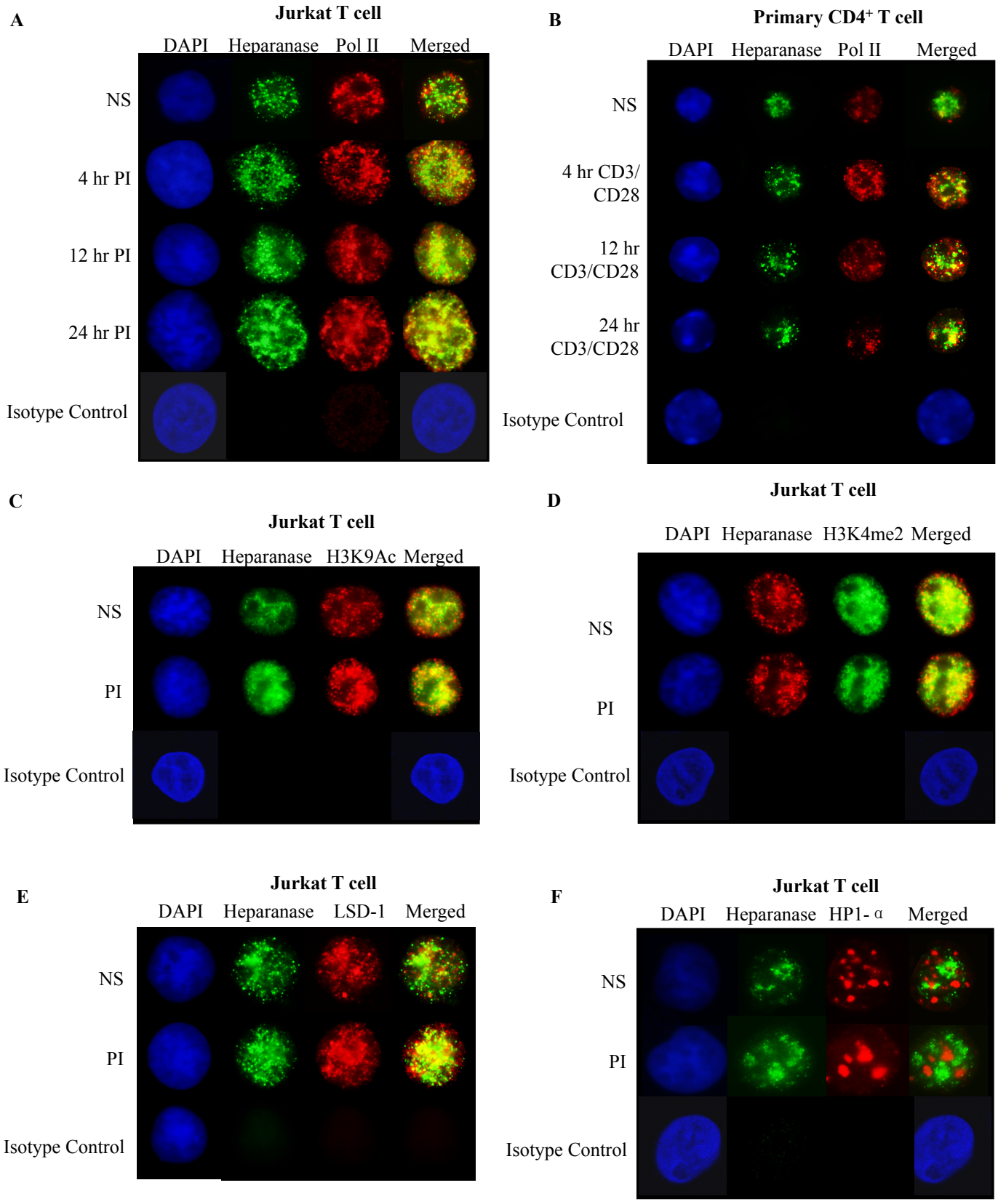
A
Jurkat T cell
DAPI
Heparanase
Pol II
Merged
NS
4 hr PI
12 hr PI
24 hr PI
Isotype Control
B
Primary CD4+ T cell
DAPI
Heparanase
Pol II
Merged
NS
4 hr CD3/ CD28
12 hr CD3/CD28
24 hr CD3/CD28
Isotype Control
C
Jurkat T cell
DAPI
Heparanase
H3K9Ac
Merged
NS
PI
Isotype Control
D
Jurkat T cell
DAPI
Heparanase
H3K4me2
Merged
NS
PI
Isotype Control
E
Jurkat T cell
DAPI
Heparanase
LSD-1
Merged
NS
PI
Isotype Control
F
Jurkat T cell
DAPI
Heparanase
HP1- α
Merged
NS
PI
Isotype Control

**Figure S4. Nuclear Heparanase Associates with Discrete Chromatin Regions**

(A) Fluorescence microscopy of fixed nuclei from Jurkat T cells (NS or PI-stimulated for the indicated time points) stained with DAPI and rabbit anti-heparanase or mouse anti-Pol II antibodies. A rabbit isotype of equivalent concentration was used as a control and showed no fluorescence.

(B) Fluorescence microscopy was performed as above using purified mouse primary CD4+ T cells that were NS or stimulated with anti-CD3 and anti-CD28 antibodies for the indicated time points.

(C-F) Fluorescence microscopy was performed as in A, using rabbit polyclonal antibodies against H3K9ac (C) and H3K4me2 (D) and mouse monoclonal antibodies against LSD1 (E) and HP-1α (F).

**Figure S5**

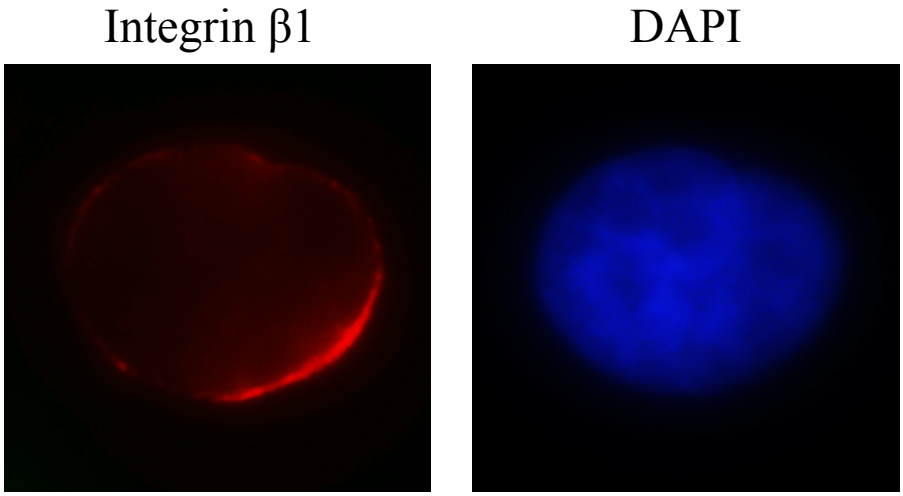


**Figure S5. Fluorescence microscopy on fixed whole cells and nuclei**
Whole cells and nuclei from Jurkat T cells were stained with the monoclonal mouse anti-human integrin β1 (Abcam, ab8238) followed by Cy3-conjugated donkey anti-mouse (Jackson ImmunoResearch, 715-165-151) and DAPI.

**Figure S6**

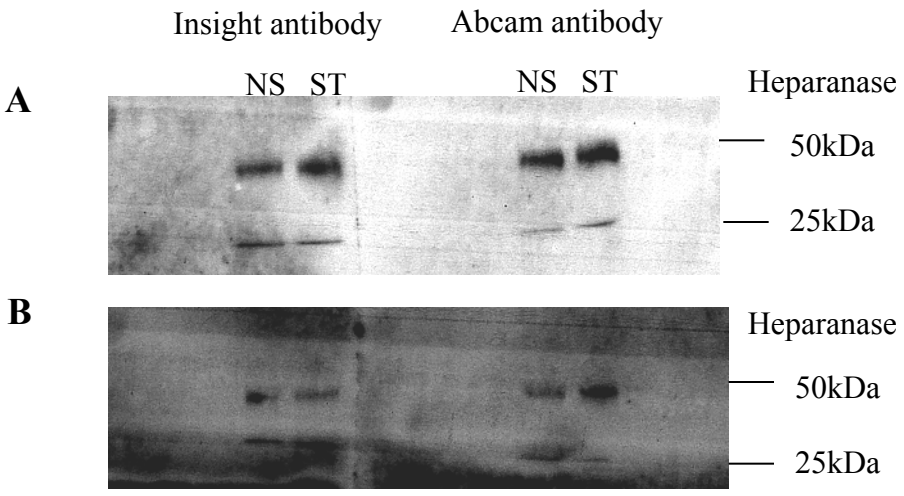


**Figure S6. Nuclear Heparanase detected with two different antibodies**
(A) Immunoblot analysis of heparanase protein levels in nuclear extracts prepared from non-stimulated (NS) and stimulated (ST) Jurkat T cells. Western blotting analysis was used to detect heparanase protein using a rabbit polyclonal heparanase antibody either from Insight (Insight, Ins-AB-04002) or Abcam (Ab85543) .
(B) Repeat experiment is shown.

**Figure S7**

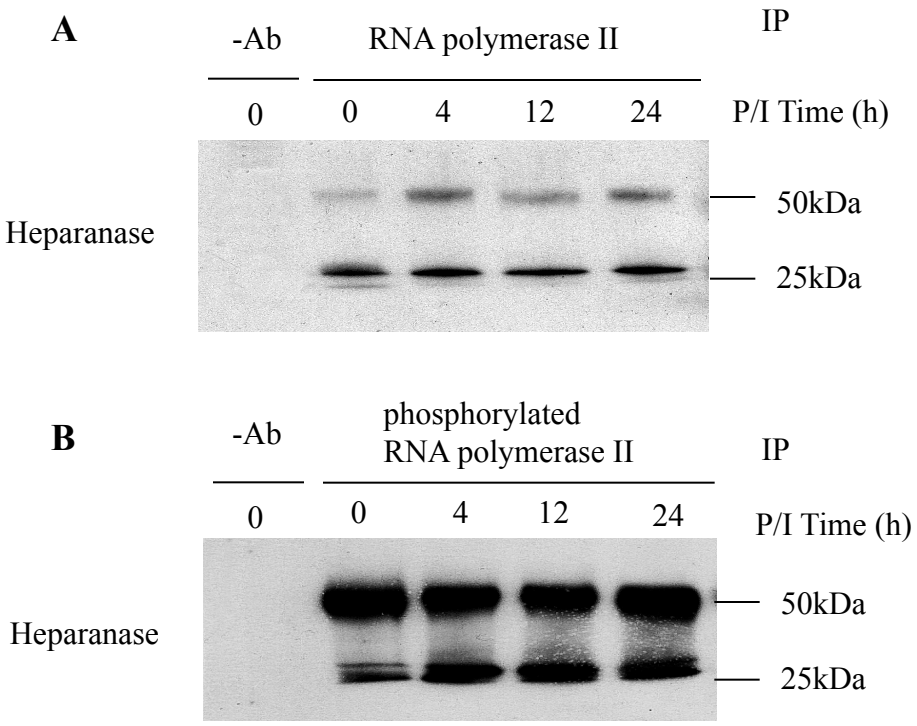


**Figure S7. Nuclear Heparanase Associates with RNA polymerase II**
Immunoprecipitation of (A) RNA polymerase II or (B) RNA polymerase II phosphorylated from cross-linked sonicated nuclear lysates of either resting (0) or or PI-treated T cells for the times indicated followed by immunoblot analysis for heparanase. No antibody (-Ab) was used as a negative control.

**Figure S8**

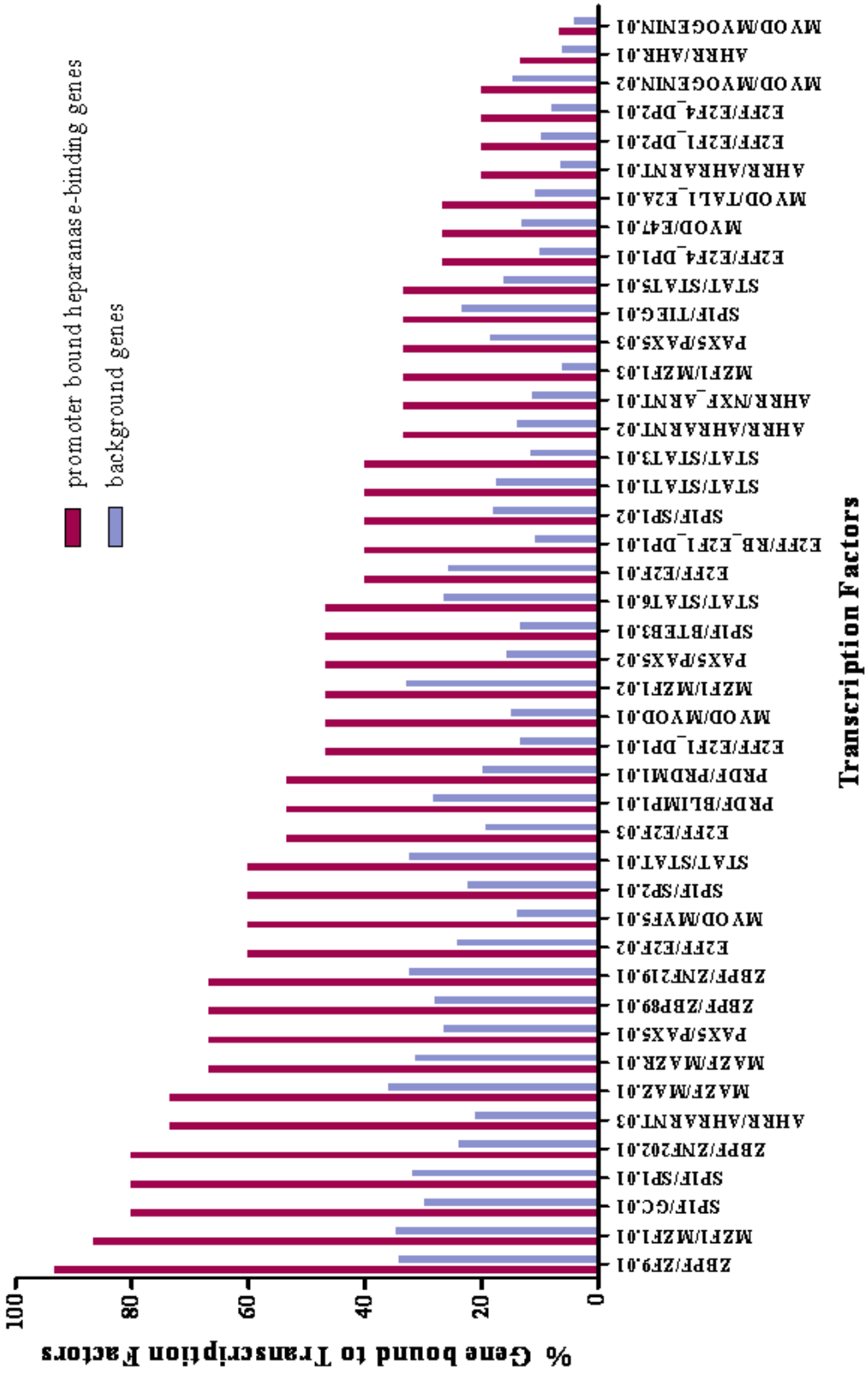


**Figure S8 Genomatix analysis showing transcription factor binding sites on heparanase target genes**

Bar graph of the most significant transcription factor modules predicted to bind heparanase within promoter regions of heparanase-bound genes identified by ChIP-on-Chip.

**Figure S9**

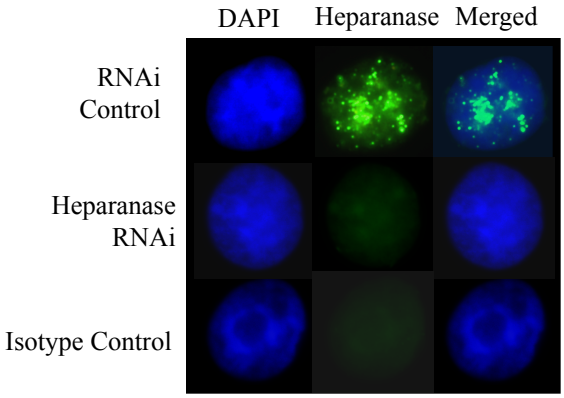


**Figure S9. Nuclear localisation of heparanase in Jurkat T cells**
(A) Fluorescence microscopy of fixed Jurkat T cells transfected with heparanase siRNA or a negative control siRNA (Ambion) at a concentration of 50 nM using Lipofectamine 2000 reagent (Invitrogen) for 2 days and subsequently stained with DAPI and rabbit polyclonal anti-heparanase. A rabbit isotype of equivalent concentration was used as a control to show no non-specific fluorescence.

**Figure S10**

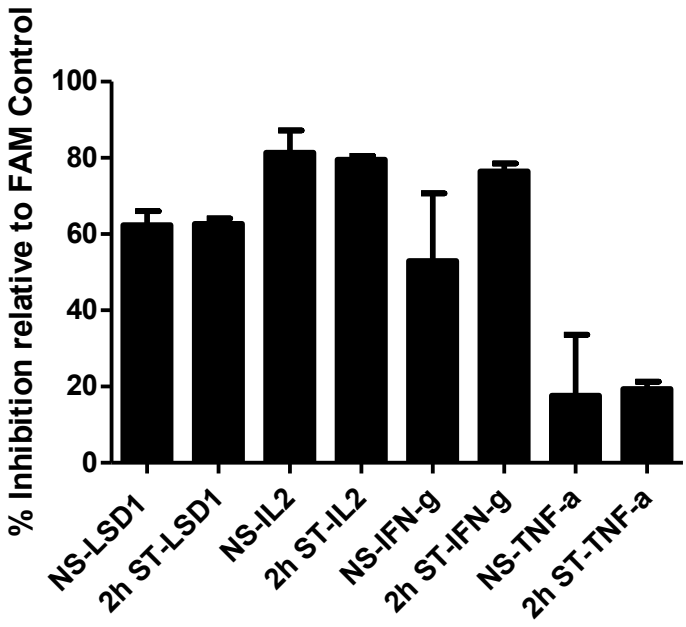


**Figure S10. LSD1 is Essential for Inducible Gene Transcription in T cells**
Jurkat T cells were transfected with 30 nM LSD1 siRNA (sc-60970) or a negative control siRNA (Mock). At 48 hr post-transfection, Jurkat T cells were either left untreated (NS) or stimulated with PI for 2 hr (ST). Total RNA was extracted and TaqMan real-time PCR performed for *LSD1*, *IL-2*, *IFN-γ* and *TNF-α*. Results are plotted as percentage inhibition relative to corresponding FAM control.

**Figure S11**

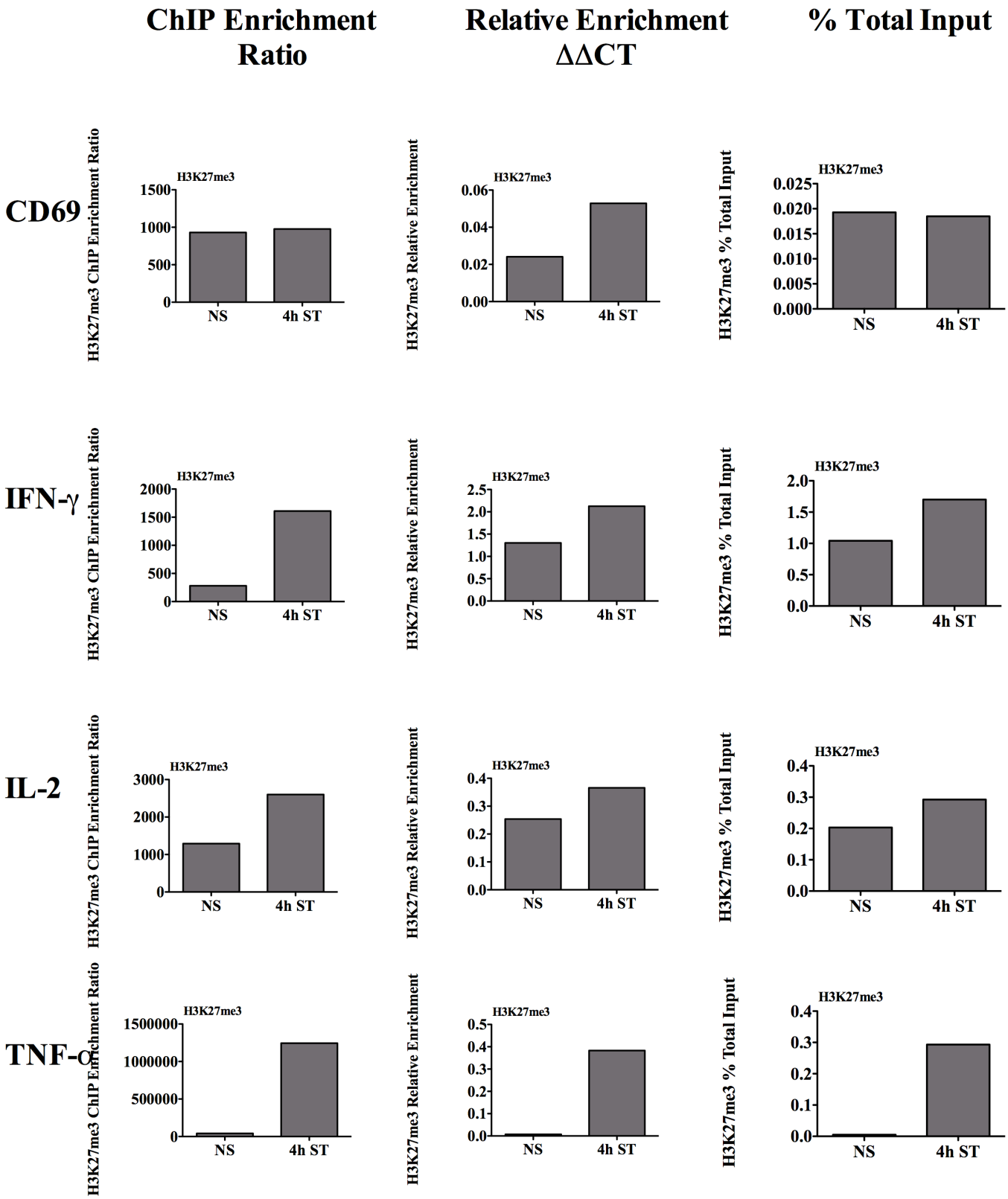
ChIP Enrichment Ratio
Relative Enrichment ΔΔCT
% Total Input
CD69
IFN-γ
IL-2
TNF-α
H3K27me3 ChIP Enrichment Ratio
H3K27me3 Relative Enrichment
H3K27me3 % Total Input
H3K27me3
NS
4h ST

**Figure S11. ChIP Analysis Comparison For H3K27me3**

ChIP assays were carried out on Jurkat T cells either non-stimulated (NS) or stimulated with PMA/CaI for 4 hours (4h ST). Real-time PCR analysis was performed on immunoprecipitated DNA recovered with the anti-H3K27me3 antibody (Abcam, ab6002) using primers covering the proximal promoter of *CD69*, *IFN-g*, *IL-2* and *TNF-a*. ChIP data were analysed by 3 different methods: 1) For ChIP enrichment ratio, Ct values were converted to arbitrary copies and data graphed as the fold enrichment ratio of immunoprecipitated DNA relative to the no antibody control and normalised against the total input DNA. 2) Relative enrichment was calculated using the ΔΔCt method. 3) Percentage total input involved subtraction of the no antibody control from the H3K27me3 samples and the data graphed by converting this value into a percentage out of the total genomic input DNA for each respective sample.

**Table S1**

**Table S1 Genes in Resting and Activated Jurkat T cells with Bound Heparanase that also Carry RNA Polymerase II**

Data based on a ChIP-on-chip assay performed on resting (NS) and 12 hr PI activated (ST) Jurkat T cells using heparanase and Pol II specific antibodies.

| Binding region / Enrichment ratio | | Promoter | | | 5'-transcribed region | | | 3'-transcribed region | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | NS | NS & ST | ST | NS | NS & ST | ST | NS | NS & ST | ST |
| R>2 (6182) | heparanase | 644 | 1387 | 469 | 969 | 1961 | 691 | 18 | 35 | 8 |
| | Pol II & heparanase | 344 (53%) | 1087 (78%) | 169 (36%) | 506 (52%) | 1518 (77%) | 228 (33%) | 12 (67%) | 24 (69%) | 5 (63%) |
| R>3 (3875) | heparanase | 72 | 1154 | 356 | 100 | 1636 | 523 | 1 | 27 | 6 |
| | Pol II & heparanase | 51 (71%) | 928 (80%) | 140 (39%) | 60 (60%) | 1297 (79%) | 176 (34%) | 1 (100%) | 20 (74%) | 3 (50%) |
| R>5 (622) | heparanase | 0 | 223 | 59 | 1 | 276 | 61 | 0 | 2 | 0 |
| | Pol II & heparanase | 0 (N/A) | 186 (83%) | 21 (36%) | 1 (100%) | 229 (83%) | 18 (30%) | 0 (N/A) | 1 (50%) | 0 (N/A) |

(Values in brackets represent % of genes with bound heparanase that also carry bound Pol II)
N/A = not applicable

**Table S2 ChIP-on-chip raw data showing the list of genes for each subgroup used to generate the Venn diagrams depicted in Figure 4A**

## HPSE- bound genes (promoter region)

## NS subset (72 genes)

| Gene | Rank (Hep-N | Chromosome | Start | End | Min P(Xbar) | Probe | P(Xbar) |
|---|---|---|---|---|---|---|---|
| BCL9 | 26 | chr1 | 145474528 | 145482321 | 0.0083724 | chr1:145478 | 0.0083724 |
| RIOK2 | 80 | chr5 | 96542285 | 96549740 | 0.01063179 | chr5:096545 | 0.01063179 |
| SLC12A3 | 100 | chr16 | 55450071 | 55458963 | 0.01101466 | chr16:05545 | 0.01101466 |
| CST11 | 122 | chr20 | 23379225 | 23386897 | 0.01155636 | chr20:02338 | 0.01155636 |
| HIST1H4D | 328 | chr6 | 26295209 | 26305006 | 0.01527961 | chr6:026297 | 0.01527961 |
| TNP2 | 396 | chr16 | 11268464 | 11274594 | 0.01615194 | chr16:01127 | 0.01615194 |
| hsa-mir-365- | 400 | chr16 | 14305449 | 14312737 | 0.01618193 | chr16:01430 | 0.01618193 |
| TGM5 | 404 | chr15 | 41344383 | 41350712 | 0.01619097 | chr15:04135 | 0.01619097 |
| COPA | 483 | chr1 | 158580130 | 158585586 | 0.01702716 | chr1:158585 | 0.01702716 |
| BTBD16 | 527 | chr10 | 124015825 | 124022272 | 0.01742544 | chr10:12401 | 0.01742544 |
| HPX | 625 | chr11 | 6416244 | 6423836 | 0.0184473 | chr11:00642 | 0.0184473 |
| CRADD | 678 | chr12 | 92590704 | 92598143 | 0.01894699 | chr12:09259 | 0.01894699 |
| RSU1 | 737 | chr10 | 16896591 | 16902586 | 0.01938508 | chr10:01689 | 0.01938508 |
| hsa-mir-142 | 859 | chr17 | 53763604 | 53769081 | 0.02036659 | chr17:05376 | 0.02036659 |
| IFNE1 | 874 | chr9 | 21469499 | 21473246 | 0.02050666 | chr9:021472 | 0.02050666 |
| IRF3 | 918 | chr19 | 54860238 | 54868994 | 0.02088004 | chr19:05486 | 0.02088004 |
| BPGM | 1003 | chr7 | 133976677 | 133984607 | 0.02145829 | chr7:133981 | 0.02145829 |
| USPL1 | 1016 | chr13 | 30084472 | 30092320 | 0.02153029 | chr13:03008 | 0.02153029 |
| SLC9A3R2 | 1118 | chr16 | 2011849 | 2019360 | 0.02223858 | chr16:00201 | 0.02223858 |
| MYADM | 1152 | chr19 | 59059318 | 59066799 | 0.02247581 | chr19:05906 | 0.02247581 |
| MRPL11 | 1179 | chr11 | 65960354 | 65963752 | 0.02261877 | chr11:06596 | 0.02261877 |
| C22orf36-GC | 1195 | chr22 | 23319187 | 23327336 | 0.0227134 | chr22:02331 | 0.0227134 |
| SSBP4 | 1265 | chr19 | 18385855 | 18393619 | 0.02313938 | chr19:01838 | 0.02313938 |
| WNT8A | 1489 | chr5 | 137442071 | 137449093 | 0.02464208 | chr5:137447 | 0.02464208 |
| RNF186 | 1503 | chr1 | 20012002 | 20019348 | 0.02476322 | chr1:020015 | 0.02476322 |
| FGF23 | 1562 | chr12 | 4356663 | 4364489 | 0.02511217 | chr12:00436 | 0.02511217 |
| FLJ35767 | 1593 | chr17 | 77905092 | 77912899 | 0.0253151 | chr17:07790 | 0.0253151 |
| KIAA1737 | 1632 | chr14 | 76629318 | 76636258 | 0.02549416 | chr14:07663 | 0.02549416 |
| C20orf144 | 1687 | chr20 | 31708624 | 31715370 | 0.02584901 | chr20:03170 | 0.02584901 |
| ANKRD2 | 1717 | chr10 | 99321126 | 99333574 | 0.02605302 | chr10:09932 | 0.02605302 |
| PISD | 1773 | chr22 | 30354478 | 30362290 | 0.02632949 | chr22:03035 | 0.02632949 |
| SLC28A1 | 1803 | chr15 | 83223681 | 83231172 | 0.02651064 | chr15:08322 | 0.02651064 |
| C14orf124 | 1827 | chr14 | 23979222 | 23982176 | 0.02663443 | chr14:02398 | 0.02663443 |
| NHP2L1 | 1924 | chr22 | 40406211 | 40414829 | 0.02717942 | chr22:04041 | 0.02717942 |
| C14orf159 | 2013 | chr14 | 90645088 | 90652318 | 0.02765591 | chr14:09065 | 0.02765591 |
| PRIC285 | 2054 | chr20 | 61667184 | 61675355 | 0.0278935 | chr20:06167 | 0.0278935 |
| RAB11FIP1 | 2141 | chr8 | 37873730 | 37881597 | 0.02835216 | chr8:037880 | 0.02835216 |
| PWWP2 | 2244 | chr10 | 134055349 | 134063105 | 0.02891875 | chr10:13405 | 0.02891875 |
| LCP1 | 2315 | chr13 | 45651978 | 45657698 | 0.02939461 | chr13:04565 | 0.02939461 |
| SEMA4D | 2340 | chr9 | 91282126 | 91289928 | 0.02951147 | chr9:091285 | 0.02951147 |
| CECR5 | 2429 | chr22 | 16018491 | 16030117 | 0.03007393 | chr22:01602 | 0.03007393 |
| PDCD10-SE | 2562 | chr3 | 168935525 | 168936167 | 0.03082651 | chr3:168935 | 0.03082651 |
| SYT8 | 2793 | chr11 | 1806120 | 1815337 | 0.03194716 | chr11:00180 | 0.03194716 |
| AIFM1-RAE | 2857 | chrX | 129127527 | 129133244 | 0.03239793 | chrX:129132 | 0.03239793 |
| SMEK2 | 2945 | chr2 | 55695588 | 55703882 | 0.03281718 | chr2:055699 | 0.03281718 |
| WDR68 | 2967 | chr17 | 58980753 | 58984037 | 0.03292285 | chr17:05898 | 0.03292285 |
| EPHB3 | 3046 | chr3 | 185757105 | 185764831 | 0.0332505 | chr3:185757 | 0.0332505 |
| KLF16 | 3132 | chr19 | 1803385 | 1819194 | 0.03364423 | chr19:00181 | 0.03364423 |
| LCN12 | 3179 | chr9 | 138961219 | 138968992 | 0.03395174 | chr9:138963 | 0.03395174 |
| HELZ | 3283 | chr17 | 62669303 | 62675309 | 0.03446858 | chr17:06267 | 0.03446858 |
| LOC51057-N | 3301 | chr2 | 63669343 | 63669497 | 0.03453812 | chr2:063669 | 0.03453812 |
| C17orf61-NI | 3426 | chr17 | 7248233 | 7252087 | 0.03515438 | chr17:00725 | 0.03515438 |
| LASS4 | 3524 | chr19 | 8175856 | 8182211 | 0.03570452 | chr19:00817 | 0.03570452 |
| WFIKKN1 | 3589 | chr16 | 619481 | 624135 | 0.03603623 | chr16:00062 | 0.03603623 |
| IFT88 | 3833 | chr13 | 20033365 | 20041219 | 0.03722604 | chr13:02003 | 0.03722604 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| BRPF1 | 3851 | chr3 | 9746715 | 9764698 | 0.03729898 | chr3:009748 | 0.03729898 |
| GOLGA2 | 3910 | chr9 | 130075982 | 130083058 | 0.03768074 | chr9:130082 | 0.03768074 |
| TFAM | 4290 | chr10 | 59809771 | 59817322 | 0.03980244 | chr10:059814 | 0.03980244 |
| ZAK | 4338 | chr2 | 173643921 | 173651316 | 0.04003086 | chr2:173648 | 0.04003086 |
| CXorf2-TKT | 4446 | chrX | 153176646 | 153177204 | 0.04066329 | chrX:153177 | 0.04066329 |
| NLRC3 | 4668 | chr16 | 3565418 | 3571123 | 0.04186397 | chr16:003569 | 0.04186397 |
| BLR1 | 4686 | chr11 | 118254785 | 118262354 | 0.04196502 | chr11:118259 | 0.04196502 |
| C14orf133-A | 4766 | chr14 | 76993687 | 76994063 | 0.04243067 | chr14:076993 | 0.04243067 |
| ARNTL | 4886 | chr11 | 13251031 | 13258380 | 0.0431609 | chr11:013255 | 0.0431609 |
| IL27 | 4902 | chr16 | 28424058 | 28431137 | 0.04328856 | chr16:028426 | 0.04328856 |
| hsa-mir-496 | 4936 | chr14 | 100596166 | 100596726 | 0.04353422 | chr14:100596 | 0.04353422 |
| U72 | 4965 | chr8 | 99124472 | 99126855 | 0.04367235 | chr8:099126 | 0.04367235 |
| FLJ35695 | 4978 | chr15 | 36770728 | 36778629 | 0.04375532 | chr15:036775 | 0.04375532 |
| IFNGR2 | 5012 | chr21 | 33691902 | 33699450 | 0.043939 | chr21:033696 | 0.043939 |
| PRKAB1 | 5088 | chr12 | 118585037 | 118592956 | 0.04439942 | chr12:118596 | 0.04439942 |
| CDC6 | 5154 | chr17 | 35692270 | 35700095 | 0.04473573 | chr17:035697 | 0.04473573 |
| NLGN1 | 5548 | chr3 | 174593547 | 174807580 | 0.04718573 | chr3:174598 | 0.04718573 |

**HPSE- bound genes (promoter region)** **NS and ST subset (1154 ge**

| Gene | Rank (Hep- | Chromosom | Start | End | Min P(Xbar) | Probe | P(Xbar) |
|---|---|---|---|---|---|---|---|
| NKX6-3 | 1 | chr8 | 41621848 | 41629546 | 0.010509 | chr8:041624 | 0.010509 |
| NTNG2 | 3 | chr9 | 134026617 | 134034414 | 0.0121243 | chr9:134029 | 0.0121243 |
| CDKN2A | 4 | chr9 | 21962817 | 21989381 | 0.0129204 | chr9:021969 | 0.0129204 |
| BOC | 5 | chr3 | 114407646 | 114416477 | 0.0130521 | chr3:114413 | 0.0130521 |
| CHD5 | 6 | chr1 | 6160776 | 6167589 | 0.0135994 | chr1:006163 | 0.0135994 |
| CBLL1 | 7 | chr7 | 107167982 | 107174249 | 0.01388 | chr7:10717 | 0.01388 |
| GPR125 | 9 | chr4 | 22124713 | 22128741 | 0.0141147 | chr4:022127 | 0.0141147 |
| RFWD2 | 16 | chr1 | 174440056 | 174447809 | 0.0148764 | chr1:174443 | 0.0148764 |
| PCDHAC1 | 20 | chr5 | 140281111 | 140289119 | 0.015095 | chr5:140286 | 0.015095 |
| RRAGD | 23 | chr6 | 90175942 | 90183958 | 0.0153406 | chr6:090178 | 0.0153406 |
| CCDC128 | 26 | chr2 | 48516472 | 48524055 | 0.0155736 | chr2:048521 | 0.0155736 |
| RPL7-RDH | 28 | chr8 | 74368477 | 74369875 | 0.015742 | chr8:074369 | 0.015742 |
| SHOX2 | 30 | chr3 | 159304262 | 159306480 | 0.0158168 | chr3:159305 | 0.0158168 |
| IQCC | 33 | chr1 | 32443748 | 32446347 | 0.015944 | chr1:032443 | 0.015944 |
| FOXF2 | 34 | chr6 | 1329705 | 1337620 | 0.0159659 | chr6:001334 | 0.0159659 |
| JARID2 | 35 | chr6 | 15349425 | 15356984 | 0.015966 | chr6:015353 | 0.015966 |
| C9orf58 | 38 | chr9 | 132958448 | 132988208 | 0.0162209 | chr9:132958 | 0.0162209 |
| PRR3 | 39 | chr6 | 30627214 | 30633000 | 0.0162888 | chr6:030632 | 0.0162888 |
| GTF3C4 | 42 | chr9 | 134530509 | 134535548 | 0.0165883 | chr9:134535 | 0.0165883 |
| FNBP1 | 43 | chr9 | 131843296 | 131845665 | 0.0167271 | chr9:131845 | 0.0167271 |
| WDR53 | 49 | chr3 | 197778102 | 197785097 | 0.0171095 | chr3:197780 | 0.0171095 |
| CENTB2 | 55 | chr3 | 196642611 | 196650517 | 0.0174189 | chr3:196645 | 0.0174189 |
| RHPN1 | 59 | chr8 | 144517099 | 144527555 | 0.0174686 | chr8:144522 | 0.0174686 |
| hsa-mir-9-1 | 61 | chr1 | 154656981 | 154665821 | 0.0176183 | chr1:154657 | 0.0176183 |
| FNDC3B | 67 | chr3 | 173236194 | 173242875 | 0.0179523 | chr3:173240 | 0.0179523 |
| IFNA6 | 70 | chr9 | 21338391 | 21343948 | 0.0180107 | chr9:021342 | 0.0180107 |
| MET | 74 | chr7 | 116094467 | 116102152 | 0.0180291 | chr7:116099 | 0.0180291 |
| IL17B | 81 | chr5 | 148736516 | 148744478 | 0.0182832 | chr5:148739 | 0.0182832 |
| AUTS2 | 82 | chr7 | 68696413 | 68705078 | 0.0183194 | chr7:068700 | 0.0183194 |
| ARHGAP26 | 84 | chr5 | 142125627 | 142132970 | 0.0184161 | chr5:142130 | 0.0184161 |
| GNAI2 | 87 | chr3 | 50238692 | 50251219 | 0.0184984 | chr3:050239 | 0.0184984 |
| NR4A3 | 88 | chr9 | 101618597 | 101631350 | 0.0185336 | chr9:101626 | 0.0185336 |
| HES5 | 89 | chr1 | 2450104 | 2456990 | 0.0185461 | chr1:002457 | 0.0185461 |
| WDR55 | 90 | chr5 | 140022201 | 140027097 | 0.0186118 | chr5:140024 | 0.0186118 |
| C7orf20 | 96 | chr7 | 881145 | 885329 | 0.0187747 | chr7:000881 | 0.0187747 |
| GDNF | 97 | chr5 | 37868206 | 37880609 | 0.0187798 | chr5:037873 | 0.0187798 |
| NSD1 | 100 | chr5 | 176487932 | 176497246 | 0.018834 | chr5:176494 | 0.018834 |

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|---|---|---|---|---|---|---|---|
| KATNB1 | 104 | chr16 | 56324907 | 56331110 | 0.0189696 | chr16:0563 | 0.0189696 |
| ADORA3 | 107 | chr1 | 111845122 | 111853720 | 0.0190575 | chr1:111852 | 0.0190575 |
| IRX1 | 112 | chr5 | 3643785 | 3651652 | 0.019195 | chr5:00364 | 0.019195 |
| hsa-mir-183 | 114 | chr7 | 129202017 | 129207605 | 0.0192376 | chr7:12920 | 0.0192376 |
| ACOT7 | 115 | chr1 | 6246935 | 6380279 | 0.0192934 | chr1:00637 | 0.0192934 |
| DGKI | 116 | chr7 | 137179622 | 137187315 | 0.0193191 | chr7:13718 | 0.0193191 |
| ZBTB47 | 118 | chr3 | 42670358 | 42678207 | 0.0193701 | chr3:04267 | 0.0193701 |
| RAP1GDS1 | 119 | chr4 | 99396317 | 99404170 | 0.0193915 | chr4:09940 | 0.0193915 |
| FSTL5 | 122 | chr4 | 163302316 | 163310043 | 0.0194305 | chr4:16330 | 0.0194305 |
| ORC4L | 124 | chr2 | 148493118 | 148500493 | 0.0194808 | chr2:14849 | 0.0194808 |
| FAM78A-PF | 125 | chr9 | 133145164 | 133150435 | 0.0195028 | chr9:13314 | 0.0195028 |
| PPP1R16A | 126 | chr8 | 145688366 | 145698305 | 0.0195629 | chr8:14569 | 0.0195629 |
| AK5 | 127 | chr1 | 77514860 | 77523188 | 0.0196541 | chr1:07752 | 0.0196541 |
| BRP44-IQW | 130 | chr1 | 166171964 | 166172459 | 0.019791 | chr1:16617 | 0.019791 |
| EN1 | 132 | chr2 | 119319871 | 119327626 | 0.0198391 | chr2:11932 | 0.0198391 |
| CDK6 | 133 | chr7 | 92298051 | 92306286 | 0.0198914 | chr7:09230 | 0.0198914 |
| TRAF1 | 134 | chr9 | 122725888 | 122734325 | 0.0198956 | chr9:12273 | 0.0198956 |
| POU4F2 | 140 | chr4 | 147774034 | 147782024 | 0.0201053 | chr4:14777 | 0.0201053 |
| HPCAL4 | 142 | chr1 | 39927235 | 39935057 | 0.0201494 | chr1:03993 | 0.0201494 |
| TIGD6 | 143 | chr5 | 149358265 | 149365892 | 0.0201552 | chr5:14936 | 0.0201552 |
| CDC20B | 145 | chr5 | 54499874 | 54509345 | 0.0202253 | chr5:05450 | 0.0202253 |
| C3orf37 | 148 | chr3 | 130479549 | 130482434 | 0.0203266 | chr3:13048 | 0.0203266 |
| hsa-mir-191 | 149 | chr3 | 49033075 | 49033388 | 0.0203358 | chr3:04903 | 0.0203358 |
| NPAS2 | 150 | chr2 | 100797754 | 100890106 | 0.0203557 | chr2:10080 | 0.0203557 |
| WASL | 151 | chr7 | 123173808 | 123180818 | 0.0203891 | chr7:12317 | 0.0203891 |
| TLX3 | 152 | chr5 | 170663426 | 170671352 | 0.0203974 | chr5:17066 | 0.0203974 |
| INPP1 | 155 | chr2 | 190912862 | 190935549 | 0.0204089 | chr2:19091 | 0.0204089 |
| KIAA1529 | 160 | chr9 | 99037149 | 99041099 | 0.0205327 | chr9:09904 | 0.0205327 |
| WNT10A | 165 | chr2 | 219449290 | 219456401 | 0.0207381 | chr2:21945 | 0.0207381 |
| PAP2D | 169 | chr1 | 99240436 | 99248282 | 0.0207872 | chr1:09924 | 0.0207872 |
| FOXP1 | 176 | chr3 | 71713510 | 71721352 | 0.021005 | chr3:07171 | 0.021005 |
| HNRPA2B1 | 178 | chr7 | 26206937 | 26207413 | 0.0210199 | chr7:02620 | 0.0210199 |
| hsa-mir-26b | 182 | chr2 | 218973058 | 218975676 | 0.0210799 | chr2:21897 | 0.0210799 |
| PTPN7 | 183 | chr1 | 200382928 | 200402549 | 0.0210878 | chr1:20040 | 0.0210878 |
| MXD4 | 188 | chr4 | 2219094 | 2239039 | 0.0211599 | chr4:00223 | 0.0211599 |
| SLC2A8 | 189 | chr9 | 129195834 | 129201623 | 0.0211943 | chr9:12919 | 0.0211943 |
| HIP1 | 191 | chr7 | 75203930 | 75211654 | 0.0212067 | chr7:07520 | 0.0212067 |
| GRIN1 | 193 | chr9 | 139150207 | 139182893 | 0.0212242 | chr9:13915 | 0.0212242 |
| IRF5 | 195 | chr7 | 128359964 | 128367934 | 0.0213019 | chr7:12836 | 0.0213019 |
| SLC1A1 | 199 | chr9 | 4477626 | 4483166 | 0.0213524 | chr9:00448 | 0.0213524 |
| GABRA4 | 200 | chr4 | 46688334 | 46695819 | 0.0214043 | chr4:04669 | 0.0214043 |
| VGF | 209 | chr7 | 100592498 | 100600494 | 0.0216518 | chr7:10059 | 0.0216518 |
| EPHA4 | 213 | chr2 | 222142699 | 222150750 | 0.0216801 | chr2:22214 | 0.0216801 |
| CAV3 | 215 | chr3 | 8744974 | 8752806 | 0.0217016 | chr3:00875 | 0.0217016 |
| SALL1 | 218 | chr16 | 49740247 | 49748161 | 0.0217332 | chr16:0497 | 0.0217332 |
| STK19 | 221 | chr6 | 32045556 | 32047476 | 0.021765 | chr6:03204 | 0.021765 |
| TPM3 | 223 | chr1 | 152420235 | 152436473 | 0.0217764 | chr1:15243 | 0.0217764 |
| CACNA2D1 | 227 | chr7 | 81908418 | 81916432 | 0.0218375 | chr7:08191 | 0.0218375 |
| FLJ44006-E | 228 | chr2 | 111592414 | 111594751 | 0.0218436 | chr2:11159 | 0.0218436 |
| NHLH1 | 231 | chr1 | 158598313 | 158605306 | 0.0219468 | chr1:15860 | 0.0219468 |
| CLK2-HCN3 | 233 | chr1 | 153509906 | 153513992 | 0.0219532 | chr1:15351 | 0.0219532 |
| B3GNT5 | 236 | chr3 | 184448408 | 184456816 | 0.0219631 | chr3:18445 | 0.0219631 |
| ACAD11-UE | 240 | chr3 | 133861676 | 133861837 | 0.0220698 | chr3:13386 | 0.0220698 |
| SMAD1 | 243 | chr4 | 146620440 | 146625588 | 0.022092 | chr4:14662 | 0.022092 |
| QRICH1 | 246 | chr3 | 49104015 | 49108281 | 0.0221591 | chr3:04910 | 0.0221591 |
| PAX5 | 254 | chr9 | 37021569 | 37029849 | 0.0222836 | chr9:03702 | 0.0222836 |
| BCAN | 255 | chr1 | 154874454 | 154881044 | 0.0223047 | chr1:15487 | 0.0223047 |
| RBM24 | 260 | chr6 | 17385450 | 17393504 | 0.0223839 | chr6:01738 | 0.0223839 |

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|---|---|---|---|---|---|---|---|
| UCN | 261 | chr2 | 27383753 | 27385341 | 0.0223955 | chr2:02738 | 0.0223955 |
| DUSP4 | 266 | chr8 | 29259973 | 29269512 | 0.0225262 | chr8:02926 | 0.0225262 |
| ACTRT2 | 267 | chr1 | 2922439 | 2930271 | 0.0225394 | chr1:00292 | 0.0225394 |
| IL12A | 269 | chr3 | 161184401 | 161191815 | 0.0225618 | chr3:16118 | 0.0225618 |
| ABCB4 | 271 | chr7 | 86941062 | 86948414 | 0.0225671 | chr7:08694 | 0.0225671 |
| KLF9 | 272 | chr9 | 72215686 | 72224882 | 0.022573 | chr9:07222 | 0.022573 |
| DDX41 | 274 | chr5 | 176871201 | 176881919 | 0.022619 | chr5:17687 | 0.022619 |
| CDC20 | 277 | chr1 | 43592810 | 43599989 | 0.0226574 | chr1:04359 | 0.0226574 |
| VAV2 | 280 | chr9 | 135844705 | 135852525 | 0.0227044 | chr9:13584 | 0.0227044 |
| PTHR2 | 281 | chr2 | 208974370 | 208982406 | 0.0227105 | chr2:20897 | 0.0227105 |
| CLSTN1 | 282 | chr1 | 9804127 | 9808456 | 0.0227239 | chr1:00980 | 0.0227239 |
| DDIT4L | 283 | chr4 | 101328247 | 101335011 | 0.0227817 | chr4:10133 | 0.0227817 |
| FGD3 | 285 | chr9 | 94771100 | 94779000 | 0.0228123 | chr9:09477 | 0.0228123 |
| MTAP | 290 | chr9 | 21787558 | 21795236 | 0.0228832 | chr9:02179 | 0.0228832 |
| YWHAG | 291 | chr7 | 75823582 | 75831693 | 0.0228977 | chr7:07582 | 0.0228977 |
| GPC1 | 292 | chr2 | 241018393 | 241046572 | 0.0229095 | chr2:24102 | 0.0229095 |
| PREP | 295 | chr6 | 105955040 | 105963189 | 0.0229262 | chr6:10595 | 0.0229262 |
| CXCR3 | 296 | chrX | 70752514 | 70760534 | 0.0229322 | chrX:07075 | 0.0229322 |
| OGG1 | 297 | chr3 | 9764769 | 9769369 | 0.0229448 | chr3:00976 | 0.0229448 |
| STC2 | 301 | chr5 | 172685507 | 172693220 | 0.0230142 | chr5:17269 | 0.0230142 |
| PCDH7 | 306 | chr4 | 30325765 | 30333629 | 0.0231396 | chr4:03032 | 0.0231396 |
| C7orf23 | 307 | chr7 | 86684458 | 86692484 | 0.0231477 | chr7:08668 | 0.0231477 |
| GGN-SPRE | 309 | chr19 | 43570653 | 43572752 | 0.0231519 | chr19:0435 | 0.0231519 |
| JMJD2A | 310 | chr1 | 43883477 | 43943725 | 0.0231578 | chr1:04388 | 0.0231578 |
| HSPA9 | 313 | chr5 | 137936402 | 137944495 | 0.023225 | chr5:13793 | 0.023225 |
| SERP1-EIF | 315 | chr3 | 151747178 | 151747222 | 0.0232448 | chr3:15174 | 0.0232448 |
| PFKFB4 | 317 | chr3 | 48566977 | 48574105 | 0.0232589 | chr3:04856 | 0.0232589 |
| CPLX1 | 321 | chr4 | 807462 | 815393 | 0.023307 | chr4:00081 | 0.023307 |
| YARS | 323 | chr1 | 33056214 | 33061859 | 0.0233286 | chr1:03305 | 0.0233286 |
| FLJ35530 | 325 | chr1 | 176773117 | 176781032 | 0.0233508 | chr1:17677 | 0.0233508 |
| DDR1 | 326 | chr6 | 30954540 | 30966993 | 0.0233658 | chr6:03095 | 0.0233658 |
| SOHLH1-K( | 327 | chr9 | 137731251 | 137733878 | 0.0233822 | chr9:13773 | 0.0233822 |
| EIF2AK3 | 328 | chr2 | 88705846 | 88712132 | 0.0233842 | chr2:08870 | 0.0233842 |
| MEST | 331 | chr7 | 129907836 | 129925614 | 0.0234157 | chr7:12991 | 0.0234157 |
| PTP4A2 | 336 | chr1 | 32155125 | 32180993 | 0.0234421 | chr1:03217 | 0.0234421 |
| MAG | 339 | chr19 | 40470076 | 40477136 | 0.0235008 | chr19:0404 | 0.0235008 |
| AQP3 | 341 | chr9 | 33435370 | 33443007 | 0.023524 | chr9:03344 | 0.023524 |
| PDZRN3 | 343 | chr3 | 73755465 | 73761775 | 0.0235395 | chr3:07375 | 0.0235395 |
| EPHA1 | 345 | chr7 | 142814057 | 142820442 | 0.0235563 | chr7:14281 | 0.0235563 |
| SEMA3B | 347 | chr3 | 50276084 | 50289586 | 0.0236015 | chr3:05027 | 0.0236015 |
| CXCR4 | 354 | chr2 | 136587636 | 136597329 | 0.0236563 | chr2:13659 | 0.0236563 |
| LMBR1 | 358 | chr7 | 156377435 | 156382804 | 0.023705 | chr7:15637 | 0.023705 |
| LHX4 | 360 | chr1 | 178460772 | 178468682 | 0.0237104 | chr1:17846 | 0.0237104 |
| ATP6V1G1 | 362 | chr9 | 116385547 | 116392014 | 0.023746 | chr9:11638 | 0.023746 |
| GRPEL1 | 363 | chr4 | 7118413 | 7126109 | 0.0237717 | chr4:00712 | 0.0237717 |
| IRX4 | 366 | chr5 | 1933359 | 1941352 | 0.0237957 | chr5:00193 | 0.0237957 |
| CAP1 | 370 | chr1 | 40273606 | 40281383 | 0.0238499 | chr1:04027 | 0.0238499 |
| NCOA2 | 372 | chr8 | 71475532 | 71482796 | 0.0238625 | chr8:07147 | 0.0238625 |
| PCBP4 | 373 | chr3 | 51966660 | 51977594 | 0.0238701 | chr3:05197 | 0.0238701 |
| DOLPP1 | 374 | chr9 | 130878224 | 130885430 | 0.0238759 | chr9:13088 | 0.0238759 |
| OLIG3 | 378 | chr6 | 137854555 | 137862683 | 0.0238982 | chr6:13786 | 0.0238982 |
| SPP1 | 380 | chr4 | 89110341 | 89118198 | 0.0239053 | chr4:08911 | 0.0239053 |
| ATXN7L2 | 381 | chr1 | 109826335 | 109836675 | 0.0239079 | chr1:10982 | 0.0239079 |
| MLLT3 | 388 | chr9 | 20609815 | 20617918 | 0.0239368 | chr9:02061 | 0.0239368 |
| ZNF76 | 390 | chr6 | 35333407 | 35371689 | 0.0239396 | chr6:03533 | 0.0239396 |
| STRN | 393 | chr2 | 37044751 | 37051179 | 0.0239641 | chr2:03704 | 0.0239641 |
| TICAM2 | 394 | chr5 | 114989687 | 114995059 | 0.0239737 | chr5:11498 | 0.0239737 |
| DGKD | 395 | chr2 | 233922380 | 233930290 | 0.0240392 | chr2:23392 | 0.0240392 |

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|---|---|---|---|---|---|---|---|
| BCL11A | 403 | chr2 | 60631441 | 60639618 | 0.0241361 | chr2:06063 | 0.0241361 |
| RAB1A | 404 | chr2 | 65208732 | 65215690 | 0.0241668 | chr2:06521 | 0.0241668 |
| NKX6-1 | 413 | chr4 | 85635987 | 85643900 | 0.0243677 | chr4:08564 | 0.0243677 |
| YTHDF3 | 415 | chr8 | 64238844 | 64246224 | 0.0244045 | chr8:06424 | 0.0244045 |
| CNTN2 | 417 | chr1 | 203273560 | 203281360 | 0.0244447 | chr1:20327 | 0.0244447 |
| TACR1 | 421 | chr2 | 75277135 | 75283259 | 0.0244669 | chr2:07528 | 0.0244669 |
| CCIN | 422 | chr9 | 36153921 | 36161884 | 0.0244697 | chr9:03615 | 0.0244697 |
| LOC253012 | 426 | chr7 | 92694148 | 92699541 | 0.0244863 | chr7:09269 | 0.0244863 |
| VLDLR | 427 | chr9 | 2606300 | 2614584 | 0.024489 | chr9:00261 | 0.024489 |
| PTCHD1 | 429 | chrX | 23256567 | 23265464 | 0.0244921 | chrX:02326 | 0.0244921 |
| SLC10A6 | 431 | chr4 | 87987127 | 87993404 | 0.0245195 | chr4:08798 | 0.0245195 |
| PPT2 | 432 | chr6 | 32229349 | 32239429 | 0.0245365 | chr6:03222 | 0.0245365 |
| DLL1 | 433 | chr6 | 170438814 | 170446929 | 0.0245383 | chr6:17044 | 0.0245383 |
| PASK-PPP1 | 434 | chr2 | 241737643 | 241738586 | 0.0245407 | chr2:24173 | 0.0245407 |
| SMC2 | 436 | chr9 | 105891088 | 105898457 | 0.0245743 | chr9:10589 | 0.0245743 |
| C6orf118 | 439 | chr6 | 165640596 | 165647741 | 0.0245982 | chr6:16564 | 0.0245982 |
| WDR86 | 442 | chr7 | 150735332 | 150741646 | 0.0246347 | chr7:15073 | 0.0246347 |
| ZNF367 | 443 | chr9 | 98190119 | 98225919 | 0.0246377 | chr9:09822 | 0.0246377 |
| SLC38A3 | 448 | chr3 | 50213447 | 50238611 | 0.024707 | chr3:05021 | 0.024707 |
| CENTB5-PL | 449 | chr1 | 1228614 | 1233777 | 0.0247196 | chr1:00123 | 0.0247196 |
| AGPAT1-RN | 450 | chr6 | 32253905 | 32254155 | 0.024723 | chr6:03225 | 0.024723 |
| CARD9 | 452 | chr9 | 138385432 | 138389762 | 0.0247633 | chr9:13838 | 0.0247633 |
| C13orf27 | 458 | chr13 | 102221663 | 102228942 | 0.0248345 | chr13:1022 | 0.0248345 |
| DENND2D | 459 | chr1 | 111542135 | 111549824 | 0.0248427 | chr1:11154 | 0.0248427 |
| GENX-3414 | 461 | chr4 | 77441948 | 77449431 | 0.0248647 | chr4:07744 | 0.0248647 |
| PFKFB3 | 462 | chr10 | 6279514 | 6287259 | 0.0248786 | chr10:0062 | 0.0248786 |
| EDN1 | 463 | chr6 | 12393583 | 12401089 | 0.0248837 | chr6:01239 | 0.0248837 |
| GPATCH4 | 467 | chr1 | 154835492 | 154840459 | 0.0249308 | chr1:15483 | 0.0249308 |
| PTPN18 | 469 | chr2 | 130820778 | 130832496 | 0.0249565 | chr2:13082 | 0.0249565 |
| REEP5 | 472 | chr5 | 112283696 | 112291312 | 0.0249956 | chr5:11228 | 0.0249956 |
| SIX3 | 473 | chr2 | 45016844 | 45025237 | 0.025005 | chr2:04502 | 0.025005 |
| LZIC-NMNA | 477 | chr1 | 9925430 | 9925920 | 0.0250481 | chr1:00992 | 0.0250481 |
| MAD2L2-C1 | 478 | chr1 | 11665135 | 11673715 | 0.025059 | chr1:01167 | 0.025059 |
| MAG1 | 479 | chr4 | 84671252 | 84679009 | 0.0250766 | chr4:08467 | 0.0250766 |
| GPR37L1 | 481 | chr1 | 200354497 | 200360633 | 0.0250907 | chr1:20035 | 0.0250907 |
| NFU1 | 482 | chr2 | 69516126 | 69521743 | 0.0250948 | chr2:06951 | 0.0250948 |
| TBCC | 483 | chr6 | 42820225 | 42827881 | 0.0251129 | chr6:04282 | 0.0251129 |
| ACCN3 | 489 | chr7 | 150373583 | 150379342 | 0.0252414 | chr7:15037 | 0.0252414 |
| C2orf52 | 495 | chr2 | 232084090 | 232092704 | 0.0252964 | chr2:23208 | 0.0252964 |
| QKI | 496 | chr6 | 163750193 | 163758716 | 0.0252979 | chr6:16375 | 0.0252979 |
| GPSM3 | 497 | chr6 | 32266519 | 32274351 | 0.0253057 | chr6:03227 | 0.0253057 |
| C5orf5 | 498 | chr5 | 137394123 | 137402161 | 0.0253069 | chr5:13739 | 0.0253069 |
| GUP1 | 501 | chr3 | 42714888 | 42723250 | 0.0253468 | chr3:04272 | 0.0253468 |
| PEX13 | 502 | chr2 | 61092874 | 61098711 | 0.0253697 | chr2:06109 | 0.0253697 |
| DAXX | 503 | chr6 | 33394578 | 33399914 | 0.0253818 | chr6:03339 | 0.0253818 |
| DNAJB5 | 511 | chr9 | 34974372 | 34982228 | 0.0254466 | chr9:03497 | 0.0254466 |
| ARRDC1 | 513 | chr9 | 139616290 | 139622180 | 0.0254631 | chr9:13961 | 0.0254631 |
| KCNS3 | 516 | chr2 | 17918108 | 17925900 | 0.0254803 | chr2:01792 | 0.0254803 |
| ATP6V0B | 520 | chr1 | 44211607 | 44216577 | 0.0255892 | chr1:04421 | 0.0255892 |
| RHOH | 522 | chr4 | 39869807 | 39877569 | 0.025615 | chr4:03987 | 0.025615 |
| RAMP1 | 525 | chr2 | 238428661 | 238435583 | 0.0256269 | chr2:23843 | 0.0256269 |
| hsa-mir-135 | 528 | chr1 | 203681669 | 203689554 | 0.0257252 | chr1:20368 | 0.0257252 |
| BCL6 | 529 | chr3 | 188935100 | 188951646 | 0.0257387 | chr3:18894 | 0.0257387 |
| RAD52 | 530 | chr12 | 928625 | 934539 | 0.0257428 | chr12:0009 | 0.0257428 |
| EYA3 | 532 | chr1 | 28285253 | 28293054 | 0.0257611 | chr1:02828 | 0.0257611 |
| CCK | 534 | chr3 | 42277697 | 42286838 | 0.0257673 | chr3:04228 | 0.0257673 |
| BARHL2 | 541 | chr1 | 90952955 | 90960819 | 0.0258815 | chr1:09095 | 0.0258815 |
| TRAIP | 542 | chr3 | 49868213 | 49870295 | 0.0258872 | chr3:04986 | 0.0258872 |

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|---|---|---|---|---|---|---|---|
| TNNT2 | 546 | chr1 | 199611036 | 199616604 | 0.0259228 | chr1:199616 | 0.0259228 |
| FBXO32 | 547 | chr8 | 124619959 | 124628142 | 0.0259312 | chr8:124622 | 0.0259312 |
| STK11 | 548 | chr19 | 1154464 | 1160130 | 0.0259406 | chr19:00115 | 0.0259406 |
| LRRC4 | 551 | chr7 | 127455630 | 127463619 | 0.0259891 | chr7:127459 | 0.0259891 |
| MTA3 | 556 | chr2 | 42645014 | 42651099 | 0.026025 | chr2:042648 | 0.026025 |
| NUP210 | 558 | chr3 | 13434420 | 13441860 | 0.0260282 | chr3:013436 | 0.0260282 |
| D4S234E | 561 | chr4 | 4434346 | 4442396 | 0.0260482 | chr4:004438 | 0.0260482 |
| TNFAIP8 | 562 | chr5 | 118714137 | 118722086 | 0.0260512 | chr5:118718 | 0.0260512 |
| ZMIZ2 | 565 | chr7 | 44756805 | 44764269 | 0.026083 | chr7:044757 | 0.026083 |
| COL27A1 | 566 | chr9 | 115952688 | 115960507 | 0.0260947 | chr9:115956 | 0.0260947 |
| HNRPK-RM | 567 | chr9 | 85785392 | 85785436 | 0.0261113 | chr9:085785 | 0.0261113 |
| DUSP2 | 568 | chr2 | 96172645 | 96180237 | 0.0261204 | chr2:096178 | 0.0261204 |
| CRMP1 | 569 | chr4 | 5938876 | 5951007 | 0.0261222 | chr4:005942 | 0.0261222 |
| GRIK3 | 570 | chr1 | 37269815 | 37277514 | 0.0261297 | chr1:037274 | 0.0261297 |
| ZBTB8OS-I | 582 | chr1 | 32888815 | 32889311 | 0.0262467 | chr1:032889 | 0.0262467 |
| IRX5 | 584 | chr16 | 53517129 | 53525100 | 0.0262672 | chr16:05352 | 0.0262672 |
| KCTD17 | 586 | chr22 | 35772056 | 35780226 | 0.026283 | chr22:03577 | 0.026283 |
| ATF2 | 588 | chr2 | 175739215 | 175746660 | 0.0262898 | chr2:17574 | 0.0262898 |
| FZD9 | 589 | chr7 | 72480934 | 72488755 | 0.0262901 | chr7:072482 | 0.0262901 |
| TNXB | 590 | chr6 | 32119533 | 32190563 | 0.026291 | chr6:032123 | 0.026291 |
| CAMK2A | 592 | chr5 | 149647122 | 149654978 | 0.0263208 | chr5:149654 | 0.0263208 |
| ST6GALNA | 594 | chr1 | 76307640 | 76315346 | 0.0263384 | chr1:076312 | 0.0263384 |
| LRBA | 600 | chr4 | 152152917 | 152161334 | 0.0263771 | chr4:152156 | 0.0263771 |
| PRDM12 | 603 | chr9 | 132524561 | 132532371 | 0.026391 | chr9:132527 | 0.026391 |
| TMEM150 | 605 | chr2 | 85680835 | 85687309 | 0.0264175 | chr2:085683 | 0.0264175 |
| GLO1 | 606 | chr6 | 38776467 | 38780595 | 0.0264213 | chr6:038778 | 0.0264213 |
| CD55 | 607 | chr1 | 205556187 | 205564153 | 0.0264295 | chr1:20556 | 0.0264295 |
| ZCCHC9 | 610 | chr5 | 80627853 | 80635712 | 0.0264438 | chr5:080633 | 0.0264438 |
| THRB | 612 | chr3 | 24509172 | 24516006 | 0.0264693 | chr3:024511 | 0.0264693 |
| ACO1 | 613 | chr9 | 32369164 | 32377179 | 0.02647 | chr9:032374 | 0.02647 |
| RSPO3 | 619 | chr6 | 127476799 | 127484480 | 0.0265149 | chr6:12748 | 0.0265149 |
| LMAN2-RG | 622 | chr5 | 176711233 | 176717465 | 0.0265412 | chr5:176711 | 0.0265412 |
| HOXD8 | 625 | chr2 | 176697833 | 176705685 | 0.0265818 | chr2:176698 | 0.0265818 |
| HSPA1L-HS | 627 | chr6 | 31890798 | 31891006 | 0.026609 | chr6:031890 | 0.026609 |
| MCM2 | 628 | chr3 | 128792006 | 128802332 | 0.0266208 | chr3:128792 | 0.0266208 |
| PGAM1 | 629 | chr10 | 99170876 | 99178561 | 0.0266398 | chr10:09917 | 0.0266398 |
| CXCL3 | 635 | chr4 | 75120874 | 75128728 | 0.0266956 | chr4:075123 | 0.0266956 |
| HAX1 | 637 | chr1 | 152510065 | 152514225 | 0.026709 | chr1:152511 | 0.026709 |
| MANEAL | 639 | chr1 | 38027062 | 38035362 | 0.026723 | chr1:038032 | 0.026723 |
| GPX7 | 640 | chr1 | 52837374 | 52842964 | 0.0267237 | chr1:052840 | 0.0267237 |
| HS6ST1 | 641 | chr2 | 128790196 | 128798236 | 0.0267266 | chr2:128794 | 0.0267266 |
| CSNK1A1 | 642 | chr5 | 148908736 | 148916671 | 0.0267272 | chr5:148911 | 0.0267272 |
| LY6H | 644 | chr8 | 144309998 | 144314595 | 0.0267516 | chr8:144313 | 0.0267516 |
| EXOSC4 | 649 | chr8 | 145200401 | 145207479 | 0.02679 | chr8:145205 | 0.02679 |
| WDR41 | 653 | chr5 | 76822111 | 76825409 | 0.0268437 | chr5:076824 | 0.0268437 |
| EMID2 | 657 | chr7 | 100787656 | 100795377 | 0.0268664 | chr7:10079 | 0.0268664 |
| LCP2 | 658 | chr5 | 169654831 | 169662904 | 0.0268726 | chr5:169660 | 0.0268726 |
| SLC25A10 | 660 | chr17 | 77285089 | 77292333 | 0.0268936 | chr17:07728 | 0.0268936 |
| GPT | 661 | chr8 | 145698369 | 145703364 | 0.0268973 | chr8:145699 | 0.0268973 |
| AIM1L | 674 | chr1 | 26552976 | 26558481 | 0.0270509 | chr1:026553 | 0.0270509 |
| SPRY1 | 677 | chr4 | 124532090 | 124542616 | 0.0270734 | chr4:124538 | 0.0270734 |
| PHF2 | 686 | chr9 | 95375119 | 95381201 | 0.0271329 | chr9:095377 | 0.0271329 |
| FGR | 688 | chr1 | 27820635 | 27839481 | 0.0271617 | chr1:027834 | 0.0271617 |
| MXD3 | 689 | chr5 | 176666803 | 176675228 | 0.0271685 | chr5:176672 | 0.0271685 |
| HSDL2 | 691 | chr9 | 114179057 | 114183281 | 0.0271789 | chr9:114181 | 0.0271789 |
| HBM | 693 | chr16 | 150919 | 156753 | 0.027193 | chr16:00015 | 0.027193 |
| TREML4 | 695 | chr6 | 41298691 | 41306495 | 0.0272008 | chr6:041303 | 0.0272008 |
| GULP1 | 696 | chr2 | 188859436 | 188865605 | 0.0272009 | chr2:188865 | 0.0272009 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DKFZP686A | 702 | chr4 | 41054541 | 41237187 | 0.0272567 | chr4:041057 | 0.0272567 |
| FLJ43879 | 703 | chr2 | 239497026 | 239517832 | 0.0272851 | chr2:23951 | 0.0272851 |
| IARS | 709 | chr9 | 94089621 | 94101179 | 0.0273525 | chr9:09409 | 0.0273525 |
| GLS | 711 | chr2 | 191448414 | 191456489 | 0.027365 | chr2:19145 | 0.027365 |
| HSPC049 | 713 | chr7 | 134544393 | 134551106 | 0.0273841 | chr7:13454 | 0.0273841 |
| ITGB8 | 715 | chr7 | 20332268 | 20340474 | 0.0273881 | chr7:02033 | 0.0273881 |
| MMEL1 | 716 | chr1 | 2552498 | 2559059 | 0.0273905 | chr1:00255 | 0.0273905 |
| MGC33600 | 719 | chr6 | 44371072 | 44374726 | 0.0274104 | chr6:04437 | 0.0274104 |
| C6orf167 | 720 | chr6 | 97834685 | 97843262 | 0.0274272 | chr6:09783 | 0.0274272 |
| GALNT10 | 723 | chr5 | 153545635 | 153553051 | 0.0274769 | chr5:15354 | 0.0274769 |
| MXI1 | 726 | chr10 | 111951945 | 111978427 | 0.0274946 | chr10:11195 | 0.0274946 |
| STXBP5 | 731 | chr6 | 147561292 | 147569872 | 0.0275041 | chr6:14756 | 0.0275041 |
| RGS12 | 732 | chr4 | 3282163 | 3411458 | 0.0275045 | chr4:00333 | 0.0275045 |
| PPFIA4 | 735 | chr1 | 201281462 | 201289968 | 0.0275468 | chr1:20128 | 0.0275468 |
| hsa-mir-31 | 737 | chr9 | 21500014 | 21507509 | 0.0275852 | chr9:02150 | 0.0275852 |
| IMPDH2 | 738 | chr3 | 49036461 | 49047287 | 0.0275868 | chr3:04904 | 0.0275868 |
| WNT7A | 739 | chr3 | 13893879 | 13902053 | 0.0276005 | chr3:01389 | 0.0276005 |
| TSNARE1 | 740 | chr8 | 143479961 | 143487625 | 0.0276009 | chr8:14348 | 0.0276009 |
| BARX1 | 741 | chr9 | 95755130 | 95762927 | 0.0276147 | chr9:09575 | 0.0276147 |
| PPP2R4 | 742 | chr9 | 130913046 | 130917729 | 0.0276196 | chr9:13091 | 0.0276196 |
| ENO1 | 744 | chr1 | 8858784 | 8866577 | 0.0276506 | chr1:00886 | 0.0276506 |
| ELL3 | 749 | chr15 | 41853899 | 41857854 | 0.0277097 | chr15:0418 | 0.0277097 |
| PTGER4 | 755 | chr5 | 40710590 | 40718169 | 0.0277733 | chr5:04071 | 0.0277733 |
| FUT10 | 760 | chr8 | 33436049 | 33450473 | 0.0278203 | chr8:03345 | 0.0278203 |
| AMPD2 | 762 | chr1 | 109964072 | 109967725 | 0.0278317 | chr1:10996 | 0.0278317 |
| LGI2 | 766 | chr4 | 24638924 | 24646859 | 0.0279163 | chr4:02464 | 0.0279163 |
| SORBS3 | 767 | chr8 | 22459925 | 22488965 | 0.0279166 | chr8:02246 | 0.0279166 |
| CNNM3 | 772 | chr2 | 96841459 | 96849085 | 0.0279553 | chr2:09684 | 0.0279553 |
| SLC30A3 | 773 | chr2 | 27336823 | 27341804 | 0.0279569 | chr2:02734 | 0.0279569 |
| NDST1 | 774 | chr5 | 149875536 | 149883101 | 0.0279742 | chr5:14987 | 0.0279742 |
| S100A14 | 775 | chr1 | 151853399 | 151857917 | 0.0279764 | chr1:15185 | 0.0279764 |
| CRYBA2 | 776 | chr2 | 219563253 | 219574155 | 0.0279789 | chr2:21956 | 0.0279789 |
| NR3C2 | 777 | chr4 | 149575139 | 149588399 | 0.0279828 | chr4:14958 | 0.0279828 |
| GLB1 | 778 | chr3 | 33113339 | 33118601 | 0.027988 | chr3:03311 | 0.027988 |
| BBS7 | 779 | chr4 | 122965150 | 123016352 | 0.0279956 | chr4:12301 | 0.0279956 |
| FBXW11 | 780 | chr5 | 171364023 | 171370174 | 0.0279979 | chr5:17136 | 0.0279979 |
| HOXA6 | 781 | chr7 | 27151643 | 27159369 | 0.0280061 | chr7:02715 | 0.0280061 |
| SH3BP5L | 785 | chr1 | 247083287 | 247089084 | 0.0280276 | chr1:24708 | 0.0280276 |
| GLRA1 | 788 | chr5 | 151281783 | 151289934 | 0.0280797 | chr5:15128 | 0.0280797 |
| CCDC18 | 790 | chr1 | 93413399 | 93418502 | 0.0281132 | chr1:09341 | 0.0281132 |
| KCNC4 | 791 | chr1 | 110550096 | 110558117 | 0.028114 | chr1:11055 | 0.028114 |
| hsa-mir-22 | 795 | chr17 | 1563973 | 1566224 | 0.0281394 | chr17:0015 | 0.0281394 |
| SFRS3 | 805 | chr6 | 36665106 | 36672411 | 0.0281804 | chr6:03666 | 0.0281804 |
| SLC25A32 | 807 | chr8 | 104496259 | 104501927 | 0.0281872 | chr8:10449 | 0.0281872 |
| HR | 812 | chr8 | 22027934 | 22049163 | 0.0282494 | chr8:02204 | 0.0282494 |
| ZAR1 | 814 | chr4 | 48185946 | 48189571 | 0.028265 | chr4:04818 | 0.028265 |
| TFAP2A | 816 | chr6 | 10517551 | 10528716 | 0.0282817 | chr6:01052 | 0.0282817 |
| LHX5 | 817 | chr12 | 112391238 | 112399766 | 0.0282875 | chr12:1123 | 0.0282875 |
| RUNX3 | 818 | chr1 | 25126484 | 25169637 | 0.0282903 | chr1:02513 | 0.0282903 |
| STEAP3 | 824 | chr2 | 119692579 | 119700377 | 0.0283425 | chr2:11969 | 0.0283425 |
| SFRS7 | 827 | chr2 | 38829585 | 38837482 | 0.0283656 | chr2:03883 | 0.0283656 |
| TSPAN17 | 829 | chr5 | 176001808 | 176008946 | 0.0283793 | chr5:17600 | 0.0283793 |
| HES2-ESPN | 832 | chr1 | 6402641 | 6407432 | 0.0284027 | chr1:00640 | 0.0284027 |
| CGI-38 | 834 | chr16 | 65980072 | 65985733 | 0.0284048 | chr16:0659 | 0.0284048 |
| PRKCZ | 836 | chr1 | 1966383 | 1974356 | 0.0284129 | chr1:00197 | 0.0284129 |
| C3orf22 | 837 | chr3 | 127758062 | 127760737 | 0.0284168 | chr3:12776 | 0.0284168 |
| NPDC1 | 838 | chr9 | 139057753 | 139062127 | 0.0284236 | chr9:13906 | 0.0284236 |
| IL3 | 839 | chr5 | 131418886 | 131426827 | 0.0284385 | chr5:13142 | 0.0284385 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| LHX3 | 841 | chr9 | 138232230 | 138237921 | 0.0284628 | chr9:138237 | 0.0284628 |
| HIGD2A | 842 | chr5 | 175743540 | 175750669 | 0.0284727 | chr5:17574 | 0.0284727 |
| DSCR1L2 | 853 | chr1 | 24696458 | 24704279 | 0.0285764 | chr1:02470 | 0.0285764 |
| RBPSUH | 860 | chr4 | 25927647 | 25934174 | 0.0286376 | chr4:02593 | 0.0286376 |
| ID2 | 861 | chr2 | 8734202 | 8742237 | 0.028641 | chr2:00873 | 0.028641 |
| YTHDC1 | 869 | chr4 | 68895617 | 68902743 | 0.0287171 | chr4:06889 | 0.0287171 |
| hsa-mir-130 | 871 | chr22 | 20328561 | 20339293 | 0.0287342 | chr22:0203 | 0.0287342 |
| CHCHD5 | 879 | chr2 | 113057306 | 113060380 | 0.0288279 | chr2:11305 | 0.0288279 |
| CASD1 | 880 | chr7 | 93973164 | 93979790 | 0.0288337 | chr7:09397 | 0.0288337 |
| PFKP | 881 | chr10 | 3096351 | 3102174 | 0.0288388 | chr10:0030 | 0.0288388 |
| SHB | 883 | chr9 | 38056541 | 38064093 | 0.0288495 | chr9:03805 | 0.0288495 |
| LBXCOR1 | 884 | chr15 | 65899562 | 65907655 | 0.02886 | chr15:0659 | 0.02886 |
| ACA36 | 885 | chrX | 153644412 | 153646868 | 0.028862 | chrX:15364 | 0.028862 |
| HOXA1 | 886 | chr7 | 27099685 | 27106440 | 0.0288867 | chr7:02710 | 0.0288867 |
| CDC25A | 890 | chr3 | 48202370 | 48207656 | 0.0289031 | chr3:04820 | 0.0289031 |
| CYP26A1 | 892 | chr10 | 94818426 | 94826580 | 0.0289374 | chr10:0948 | 0.0289374 |
| TCF7 | 898 | chr5 | 133473021 | 133482019 | 0.0289561 | chr5:13347 | 0.0289561 |
| UBXD8 | 899 | chr5 | 175803933 | 175810131 | 0.0289611 | chr5:17580 | 0.0289611 |
| DNTTIP2 | 900 | chr1 | 94114833 | 94122471 | 0.0289646 | chr1:09411 | 0.0289646 |
| GSN | 903 | chr9 | 123064818 | 123104361 | 0.0289681 | chr9:12309 | 0.0289681 |
| GMPPA | 906 | chr2 | 220066559 | 220073536 | 0.0289948 | chr2:22006 | 0.0289948 |
| ADPRHL2 | 907 | chr1 | 36326541 | 36329613 | 0.028995 | chr1:03632 | 0.028995 |
| CCNE1 | 908 | chr19 | 34989239 | 34997901 | 0.0290026 | chr19:0349 | 0.0290026 |
| SMARCAL1 | 911 | chr2 | 216979953 | 216990099 | 0.0290198 | chr2:21698 | 0.0290198 |
| PEX10 | 917 | chr1 | 2331438 | 2339051 | 0.0290605 | chr1:00233 | 0.0290605 |
| NES | 918 | chr1 | 154911391 | 154919076 | 0.0290665 | chr1:15491 | 0.0290665 |
| C9orf128-C | 921 | chr9 | 35818778 | 35819167 | 0.0290884 | chr9:03581 | 0.0290884 |
| HOXA11 | 923 | chr7 | 27187279 | 27196872 | 0.0291017 | chr7:02719 | 0.0291017 |
| CPZ | 924 | chr4 | 8640399 | 8647960 | 0.029102 | chr4:00864 | 0.029102 |
| C7orf27-IQ( | 927 | chr7 | 2561669 | 2564657 | 0.0291118 | chr7:00256 | 0.0291118 |
| SAMD12 | 928 | chr8 | 119701542 | 119708655 | 0.029127 | chr8:11970 | 0.029127 |
| P4HA2 | 930 | chr5 | 131588176 | 131596327 | 0.0291288 | chr5:13159 | 0.0291288 |
| YWHAZ | 931 | chr8 | 102031038 | 102040188 | 0.0291498 | chr8:10203 | 0.0291498 |
| TRIP12-FB) | 933 | chr2 | 230494941 | 230495407 | 0.0291751 | chr2:23049 | 0.0291751 |
| SHROOM1 | 935 | chr5 | 132187335 | 132195353 | 0.0291799 | chr5:13219 | 0.0291799 |
| SGK | 936 | chr6 | 134535372 | 134542742 | 0.0291896 | chr6:13453 | 0.0291896 |
| STAT3 | 939 | chr17 | 37792251 | 37798886 | 0.0291984 | chr17:0377 | 0.0291984 |
| TBC1D19 | 946 | chr4 | 26189434 | 26195504 | 0.0292901 | chr4:02619 | 0.0292901 |
| UBQLN4-M | 947 | chr1 | 154290320 | 154291196 | 0.029298 | chr1:15429 | 0.029298 |
| TNRC4 | 949 | chr1 | 149952721 | 149961400 | 0.029339 | chr1:14995 | 0.029339 |
| PCSK6 | 953 | chr15 | 99844885 | 99852818 | 0.0293748 | chr15:0998 | 0.0293748 |
| C1orf90 | 955 | chr1 | 32477525 | 32487070 | 0.0293968 | chr1:03247 | 0.0293968 |
| GRM4 | 958 | chr6 | 34206920 | 34214870 | 0.0294367 | chr6:03421 | 0.0294367 |
| SFTPB | 959 | chr2 | 85746551 | 85754343 | 0.029447 | chr2:08574 | 0.029447 |
| TBX20 | 960 | chr7 | 35257312 | 35265271 | 0.0294635 | chr7:03526 | 0.0294635 |
| TMEM161B | 966 | chr5 | 87597895 | 87605154 | 0.0295579 | chr5:08760 | 0.0295579 |
| SLC16A2 | 971 | chrX | 73552308 | 73560439 | 0.0295889 | chrX:07355 | 0.0295889 |
| LFNG | 972 | chr7 | 2518509 | 2526453 | 0.0295911 | chr7:00251 | 0.0295911 |
| MTPN | 974 | chr7 | 135310129 | 135316678 | 0.0296206 | chr7:13531 | 0.0296206 |
| DOCK9 | 976 | chr13 | 98534173 | 98541829 | 0.0296242 | chr13:0985 | 0.0296242 |
| HTR1A | 977 | chr5 | 63290850 | 63298796 | 0.0296339 | chr5:06329 | 0.0296339 |
| ZBTB7B | 978 | chr1 | 153243717 | 153256275 | 0.0296345 | chr1:15324 | 0.0296345 |
| DLG3 | 983 | chrX | 69578415 | 69584250 | 0.0296685 | chrX:06958 | 0.0296685 |
| ERGIC1 | 985 | chr5 | 172188658 | 172266814 | 0.0296899 | chr5:17226 | 0.0296899 |
| ZNF678 | 988 | chr1 | 225812689 | 225918037 | 0.0297109 | chr1:22581 | 0.0297109 |
| ST3GAL1 | 989 | chr8 | 134651076 | 134657028 | 0.0297138 | chr8:13465 | 0.0297138 |
| RNF44-PCL | 990 | chr5 | 175899315 | 175907020 | 0.0297143 | chr5:17590 | 0.0297143 |
| CCDC21 | 1003 | chr1 | 26427832 | 26477892 | 0.0297701 | chr1:02643 | 0.0297701 |

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|---|---|---|---|---|---|---|---|
| MSL3L1 | 1004 | chrX | 11680783 | 11688810 | 0.0297828 | chrX:011687 | 0.0297828 |
| NRP1 | 1006 | chr10 | 33661056 | 33669255 | 0.0297928 | chr10:03366 | 0.0297928 |
| SYPL1 | 1011 | chr7 | 105537554 | 105543433 | 0.0298335 | chr7:10554( | 0.0298335 |
| PHPT1 | 1012 | chr9 | 138861733 | 138865317 | 0.0298367 | chr9:13886: | 0.0298367 |
| PHC2 | 1013 | chr1 | 33585481 | 33618387 | 0.0298372 | chr1:033617 | 0.0298372 |
| TINAGL1 | 1022 | chr1 | 31809448 | 31817777 | 0.0299216 | chr1:03181- | 0.0299216 |
| FARSLA-C/ | 1026 | chr19 | 12905597 | 12910320 | 0.0299623 | chr19:0129' | 0.0299623 |
| HOXA7 | 1027 | chr7 | 27160181 | 27168252 | 0.0299688 | chr7:027167 | 0.0299688 |
| TIAL1 | 1029 | chr10 | 121341027 | 121348641 | 0.0299751 | chr10:1213- | 0.0299751 |
| MGST3 | 1032 | chr1 | 163861746 | 163887480 | 0.0300646 | chr1:163866 | 0.0300646 |
| SPOP | 1042 | chr17 | 45108455 | 45115188 | 0.0301295 | chr17:04511 | 0.0301295 |
| KCNA2 | 1043 | chr1 | 110946731 | 110955384 | 0.030142 | chr1:110952 | 0.030142 |
| LIN28 | 1044 | chr1 | 26604462 | 26626821 | 0.0301477 | chr1:026608 | 0.0301477 |
| UBE2J2-SC | 1047 | chr1 | 1199161 | 1207310 | 0.0301735 | chr1:001199 | 0.0301735 |
| HTRA4 | 1051 | chr8 | 38945472 | 38953420 | 0.0302049 | chr8:038946 | 0.0302049 |
| ACCN4 | 1056 | chr2 | 220081805 | 220111756 | 0.0302307 | chr2:220087 | 0.0302307 |
| NUP133 | 1059 | chr1 | 227708297 | 227714644 | 0.0302477 | chr1:22771( | 0.0302477 |
| CLDN19 | 1061 | chr1 | 42976249 | 42983889 | 0.0302649 | chr1:042979 | 0.0302649 |
| LOC401565 | 1066 | chr9 | 139262223 | 139265508 | 0.030287 | chr9:139262 | 0.030287 |
| NXT1 | 1067 | chr20 | 23274099 | 23281714 | 0.0302917 | chr20:02327 | 0.0302917 |
| RNGTT | 1071 | chr6 | 89729462 | 89732025 | 0.0303054 | chr6:089730 | 0.0303054 |
| TNK2 | 1076 | chr3 | 197104498 | 197124860 | 0.0303217 | chr3:19712' | 0.0303217 |
| CKMT2 | 1082 | chr5 | 80559422 | 80567305 | 0.0303829 | chr5:080564 | 0.0303829 |
| SPEN | 1087 | chr1 | 16041448 | 16049379 | 0.0304245 | chr1:016046 | 0.0304245 |
| DBT | 1093 | chr1 | 100486410 | 100492602 | 0.030478 | chr1:100488 | 0.030478 |
| SMC4 | 1097 | chr3 | 161600206 | 161607694 | 0.0304945 | chr3:161600 | 0.0304945 |
| POPDC2 | 1104 | chr3 | 120859696 | 120865728 | 0.0305344 | chr3:120862 | 0.0305344 |
| CDGAP | 1106 | chr3 | 120492349 | 120498330 | 0.0305458 | chr3:120495 | 0.0305458 |
| WNT9A | 1107 | chr1 | 226199880 | 226207698 | 0.0305534 | chr1:226203 | 0.0305534 |
| DRD1 | 1113 | chr5 | 174800475 | 174808536 | 0.0306252 | chr5:174803 | 0.0306252 |
| hsa-mir-7-1 | 1115 | chr9 | 85774581 | 85784514 | 0.0306453 | chr9:085784 | 0.0306453 |
| ACOT11 | 1116 | chr1 | 54781044 | 54788719 | 0.0306608 | chr1:054786 | 0.0306608 |
| CD72 | 1117 | chr9 | 35606011 | 35613535 | 0.0306643 | chr9:035608 | 0.0306643 |
| REEP4 | 1118 | chr8 | 22052576 | 22060130 | 0.0306654 | chr8:022055 | 0.0306654 |
| LRRFIP2 | 1121 | chr3 | 37188865 | 37197051 | 0.0306895 | chr3:037192 | 0.0306895 |
| OSBPL3 | 1123 | chr7 | 24984163 | 24991722 | 0.0307027 | chr7:024986 | 0.0307027 |
| C1orf76 | 1127 | chr1 | 177977826 | 177981341 | 0.0307185 | chr1:177978 | 0.0307185 |
| DISC1 | 1129 | chr1 | 229823673 | 229831531 | 0.0307358 | chr1:229829 | 0.0307358 |
| INMT | 1131 | chr7 | 30753067 | 30760323 | 0.0307506 | chr7:030757 | 0.0307506 |
| GPR17 | 1132 | chr2 | 128115002 | 128126676 | 0.0307537 | chr2:128115 | 0.0307537 |
| PCBP1 | 1134 | chr2 | 70163770 | 70170849 | 0.0307586 | chr2:070167 | 0.0307586 |
| IPPK | 1135 | chr9 | 94469621 | 94477523 | 0.0307741 | chr9:094472 | 0.0307741 |
| APOBEC2 | 1136 | chr6 | 41120225 | 41131343 | 0.0307989 | chr6:041125 | 0.0307989 |
| MFSD3 | 1138 | chr8 | 145703542 | 145707324 | 0.0308162 | chr8:145703 | 0.0308162 |
| CALCA | 1139 | chr11 | 14947915 | 14955703 | 0.0308264 | chr11:01495 | 0.0308264 |
| HSD17B10 | 1143 | chrX | 53475554 | 53483296 | 0.0308485 | chrX:053478 | 0.0308485 |
| VSTM2 | 1144 | chr7 | 54572772 | 54580325 | 0.0308535 | chr7:054577 | 0.0308535 |
| GPR124 | 1154 | chr8 | 37768528 | 37776429 | 0.0309006 | chr8:037773 | 0.0309006 |
| GPR55 | 1160 | chr2 | 231496174 | 231503247 | 0.0309217 | chr2:231499 | 0.0309217 |
| PNMA2 | 1161 | chr8 | 26424857 | 26432849 | 0.0309517 | chr8:026427 | 0.0309517 |
| SPAG6 | 1169 | chr10 | 22668955 | 22676858 | 0.0310126 | chr10:02267 | 0.0310126 |
| PLK3 | 1179 | chr1 | 45036593 | 45044203 | 0.0310809 | chr1:045038 | 0.0310809 |
| LRRN1 | 1180 | chr3 | 3811736 | 3819044 | 0.0310836 | chr3:003815 | 0.0310836 |
| CXXC5 | 1187 | chr5 | 139002700 | 139010649 | 0.0311149 | chr5:139002 | 0.0311149 |
| MMD2 | 1191 | chr7 | 4962993 | 4969890 | 0.0311317 | chr7:004966 | 0.0311317 |
| SNCA | 1197 | chr4 | 90974141 | 90982556 | 0.0311704 | chr4:090977 | 0.0311704 |
| SNAP23 | 1208 | chr15 | 40569749 | 40575878 | 0.0312268 | chr15:04057 | 0.0312268 |
| GNB2L1 | 1209 | chr5 | 180601099 | 180608950 | 0.0312403 | chr5:180606 | 0.0312403 |

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|---|---|---|---|---|---|---|---|
| COL12A1 | 1210 | chr6 | 75969821 | 75977280 | 0.0312464 | chr6:075972 | 0.0312464 |
| PLEC1 | 1216 | chr8 | 145083274 | 145123215 | 0.0312614 | chr8:145119 | 0.0312614 |
| RET | 1218 | chr10 | 42887078 | 42895112 | 0.0312775 | chr10:04289 | 0.0312775 |
| NETO1 | 1223 | chr18 | 68681471 | 68690910 | 0.0313231 | chr18:06868 | 0.0313231 |
| KLHL20 | 1224 | chr1 | 171945711 | 171953841 | 0.0313235 | chr1:171950 | 0.0313235 |
| PDE6D-CO | 1225 | chr2 | 232354279 | 232359319 | 0.0313239 | chr2:232359 | 0.0313239 |
| SLC31A1 | 1231 | chr9 | 115018404 | 115026138 | 0.0313614 | chr9:115023 | 0.0313614 |
| hsa-mir-149 | 1234 | chr2 | 241038637 | 241044013 | 0.0313658 | chr2:241042 | 0.0313658 |
| DZIP1L | 1235 | chr3 | 139314965 | 139322407 | 0.0313672 | chr3:139317 | 0.0313672 |
| KPNA4 | 1237 | chr3 | 161764205 | 161771154 | 0.031376 | chr3:161766 | 0.031376 |
| KCNIP4 | 1240 | chr4 | 20490977 | 21563714 | 0.0313851 | chr4:021559 | 0.0313851 |
| CEBPZ-PR( | 1241 | chr2 | 37312235 | 37312279 | 0.0313976 | chr2:037312 | 0.0313976 |
| LRPAP1 | 1245 | chr4 | 3501501 | 3505937 | 0.0314252 | chr4:003504 | 0.0314252 |
| LRIG2 | 1246 | chr1 | 113412717 | 113419782 | 0.0314258 | chr1:113417 | 0.0314258 |
| SH2D3C | 1250 | chr9 | 129540534 | 129579973 | 0.0314798 | chr9:129579 | 0.0314798 |
| CD177 | 1253 | chr19 | 48548243 | 48551509 | 0.0315019 | chr19:04854 | 0.0315019 |
| CHERP | 1259 | chr19 | 16512835 | 16519347 | 0.0315532 | chr19:01651 | 0.0315532 |
| ANKMY1-D | 1265 | chr2 | 241146178 | 241148103 | 0.0315846 | chr2:241147 | 0.0315846 |
| FAM36A | 1266 | chr1 | 243060417 | 243067931 | 0.0315937 | chr1:243065 | 0.0315937 |
| C8orf55 | 1267 | chr8 | 143801747 | 143806960 | 0.0315953 | chr8:143805 | 0.0315953 |
| ARHGEF4 | 1272 | chr2 | 131385186 | 131393146 | 0.0316156 | chr2:131389 | 0.0316156 |
| PDGFRB-C | 1284 | chr5 | 149517036 | 149525431 | 0.0316912 | chr5:149521 | 0.0316912 |
| SOX17 | 1292 | chr8 | 55527789 | 55535760 | 0.0317087 | chr8:055529 | 0.0317087 |
| FIBCD1 | 1294 | chr9 | 132801485 | 132809525 | 0.0317664 | chr9:132808 | 0.0317664 |
| RPIA | 1297 | chr2 | 88767770 | 88775005 | 0.0317916 | chr2:088772 | 0.0317916 |
| GPR61 | 1306 | chr1 | 109878906 | 109889844 | 0.0318708 | chr1:109879 | 0.0318708 |
| CYP26C1 | 1308 | chr10 | 94809646 | 94818306 | 0.0318809 | chr10:0948 | 0.0318809 |
| GPAA1 | 1311 | chr8 | 145207543 | 145212066 | 0.0318913 | chr8:145207 | 0.0318913 |
| ZMYND19 | 1317 | chr9 | 139596445 | 139607260 | 0.0319382 | chr9:139605 | 0.0319382 |
| ZNF131 | 1318 | chr5 | 43156625 | 43164222 | 0.0319396 | chr5:043156 | 0.0319396 |
| SATB2-FLJ3 | 1327 | chr2 | 200033461 | 200042755 | 0.0320406 | chr2:200037 | 0.0320406 |
| PXK | 1330 | chr3 | 58288439 | 58296249 | 0.032046 | chr3:058293 | 0.032046 |
| MAFB | 1332 | chr20 | 38748420 | 38756778 | 0.0320533 | chr20:03875 | 0.0320533 |
| ZNF770 | 1336 | chr15 | 33065756 | 33072832 | 0.0320718 | chr15:03306 | 0.0320718 |
| DHRS3 | 1337 | chr1 | 12597570 | 12605805 | 0.0320749 | chr1:012602 | 0.0320749 |
| SPIN1 | 1339 | chr9 | 28888252 | 90195641 | 0.0320861 | chr9:090192 | 0.0320861 |
| FRMD1 | 1341 | chr6 | 168220350 | 168228094 | 0.0320951 | chr6:168226 | 0.0320951 |
| LOC553158 | 1342 | chr22 | 43479214 | 43489065 | 0.0320971 | chr22:04348 | 0.0320971 |
| FTSJ1 | 1344 | chrX | 48219495 | 48222743 | 0.0321132 | chrX:048219 | 0.0321132 |
| ARID1B | 1345 | chr6 | 157135589 | 157143285 | 0.0321135 | chr6:157140 | 0.0321135 |
| EIF2B5 | 1347 | chr3 | 185330346 | 185338272 | 0.0321313 | chr3:185335 | 0.0321313 |
| hsa-mir-200 | 1348 | chr1 | 1086861 | 1092425 | 0.0321339 | chr1:001090 | 0.0321339 |
| SUPT7L | 1349 | chr2 | 27740080 | 27745509 | 0.0321351 | chr2:027740 | 0.0321351 |
| PAFAH1B3 | 1352 | chr19 | 47498103 | 47506821 | 0.032149 | chr19:04749 | 0.032149 |
| SNX5-C20o | 1355 | chr20 | 17897498 | 17897762 | 0.0321753 | chr20:01789 | 0.0321753 |
| PPP2R2C | 1359 | chr4 | 6432166 | 6528433 | 0.0322062 | chr4:006527 | 0.0322062 |
| RCL1 | 1360 | chr9 | 4781986 | 4842459 | 0.0322077 | chr9:004782 | 0.0322077 |
| PROX1 | 1364 | chr1 | 212223028 | 212230969 | 0.03222 | chr1:212225 | 0.03222 |
| TP53INP1 | 1366 | chr8 | 96020696 | 96035461 | 0.0322271 | chr8:096031 | 0.0322271 |
| hsa-mir-589 | 1368 | chr7 | 5505268 | 5511950 | 0.032254 | chr7:005507 | 0.032254 |
| INPP5B | 1376 | chr1 | 38183852 | 38190759 | 0.0323427 | chr1:038187 | 0.0323427 |
| U84 | 1377 | chr6 | 31617054 | 31618188 | 0.0323433 | chr6:031617 | 0.0323433 |
| GPR78 | 1384 | chr4 | 8627903 | 8640317 | 0.032411 | chr4:008628 | 0.032411 |
| WNT2B | 1387 | chr1 | 112805250 | 112855909 | 0.0324187 | chr1:112851 | 0.0324187 |
| GATA4 | 1390 | chr8 | 11593734 | 11654701 | 0.0324453 | chr8:011597 | 0.0324453 |
| PERQ1 | 1391 | chr7 | 100121151 | 100129576 | 0.0324501 | chr7:100128 | 0.0324501 |
| COX18 | 1398 | chr4 | 74151828 | 74159766 | 0.0324832 | chr4:074154 | 0.0324832 |
| RUVBL1 | 1402 | chr3 | 129323773 | 129330694 | 0.0325023 | chr3:129325 | 0.0325023 |

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|---|---|---|---|---|---|---|---|
| SCGB3A1 | 1403 | chr5 | 179949049 | 179956599 | 0.0325127 | chr5:17995 | 0.0325127 |
| CUL3 | 1404 | chr2 | 225155445 | 225163714 | 0.0325252 | chr2:22516 | 0.0325252 |
| C9orf24 | 1418 | chr9 | 34369086 | 34387891 | 0.0325961 | chr9:03437 | 0.0325961 |
| ARPP-21 | 1422 | chr3 | 35652250 | 35763498 | 0.0326137 | chr3:03565 | 0.0326137 |
| SFTPG | 1423 | chr6 | 31005808 | 31013341 | 0.0326334 | chr6:03100 | 0.0326334 |
| FLJ35779 | 1425 | chr5 | 75041738 | 75049395 | 0.0326446 | chr5:07504 | 0.0326446 |
| IFT172 | 1430 | chr2 | 27564277 | 27568202 | 0.0326704 | chr2:02756 | 0.0326704 |
| BMPER | 1431 | chr7 | 33906200 | 33914077 | 0.0326741 | chr7:03391 | 0.0326741 |
| SNTG2 | 1433 | chr2 | 932552 | 939022 | 0.0327005 | chr2:00093 | 0.0327005 |
| EPB49 | 1436 | chr8 | 21962957 | 21973772 | 0.0327147 | chr8:02196 | 0.0327147 |
| hsa-mir-375 | 1439 | chr2 | 219574592 | 219575842 | 0.0327383 | chr2:21957 | 0.0327383 |
| FOXO3A | 1440 | chr6 | 108982322 | 108991575 | 0.0327451 | chr6:10898 | 0.0327451 |
| ZMYM3 | 1442 | chrX | 70387503 | 70396573 | 0.0327647 | chrX:07039 | 0.0327647 |
| PTF1A | 1451 | chr10 | 23516176 | 23523902 | 0.0328502 | chr10:0235 | 0.0328502 |
| GABRD | 1456 | chr1 | 1935804 | 1943242 | 0.0328857 | chr1:00193 | 0.0328857 |
| MYL7 | 1468 | chr7 | 44144959 | 44150350 | 0.0330074 | chr7:04414 | 0.0330074 |
| hsa-mir-374 | 1470 | chrX | 73423869 | 73429361 | 0.0330265 | chrX:07342 | 0.0330265 |
| FLJ38973 | 1471 | chr2 | 200480549 | 200486792 | 0.0330303 | chr2:20048 | 0.0330303 |
| CACYBP | 1472 | chr1 | 173229728 | 173238408 | 0.0330322 | chr1:17323 | 0.0330322 |
| IL1RN | 1478 | chr2 | 113586513 | 113604114 | 0.0330827 | chr2:11359 | 0.0330827 |
| AVPR2 | 1479 | chrX | 152819562 | 152825728 | 0.0330848 | chrX:15282 | 0.0330848 |
| ARRDC3 | 1481 | chr5 | 90712611 | 90719796 | 0.0330935 | chr5:09071 | 0.0330935 |
| GPR158 | 1482 | chr10 | 25499165 | 25506484 | 0.0331047 | chr10:0255 | 0.0331047 |
| IL1RAP | 1488 | chr3 | 191709512 | 191717008 | 0.0331451 | chr3:19171 | 0.0331451 |
| FLJ32011 | 1489 | chr1 | 46785890 | 46793746 | 0.0331571 | chr1:04679 | 0.0331571 |
| SEMA3F | 1490 | chr3 | 50162350 | 50201529 | 0.0331681 | chr3:05016 | 0.0331681 |
| TBX3 | 1491 | chr12 | 113602951 | 113611820 | 0.0331748 | chr12:1136 | 0.0331748 |
| COMP | 1492 | chr19 | 18760682 | 18768472 | 0.0331835 | chr19:0187 | 0.0331835 |
| PNOC | 1495 | chr8 | 28225176 | 28233227 | 0.033209 | chr8:02822 | 0.033209 |
| GRAMD1A | 1498 | chr19 | 40177617 | 40209191 | 0.0332285 | chr19:0401 | 0.0332285 |
| ENTPD3 | 1499 | chr3 | 40398334 | 40406401 | 0.033238 | chr3:04040 | 0.033238 |
| ASS1 | 1500 | chr9 | 132305079 | 132312649 | 0.0332491 | chr9:13230 | 0.0332491 |
| TTC27 | 1501 | chr2 | 32701270 | 32709066 | 0.0332509 | chr2:03270 | 0.0332509 |
| GLRX | 1502 | chr5 | 95182809 | 95189649 | 0.0332546 | chr5:09518 | 0.0332546 |
| LYSMD3 | 1504 | chr5 | 89858662 | 89866678 | 0.0332637 | chr5:08986 | 0.0332637 |
| DDX4 | 1513 | chr5 | 55064097 | 55073014 | 0.0333778 | chr5:05506 | 0.0333778 |
| DPH5 | 1515 | chr1 | 101261670 | 101269160 | 0.0333998 | chr1:10126 | 0.0333998 |
| GABBR1 | 1518 | chr6 | 29701294 | 29714320 | 0.0334071 | chr6:02970 | 0.0334071 |
| C6orf208 | 1519 | chr6 | 169926857 | 169946243 | 0.0334138 | chr6:16993 | 0.0334138 |
| NUDT2 | 1523 | chr9 | 34314130 | 34331459 | 0.0334446 | chr9:03431 | 0.0334446 |
| C1orf109-C | 1525 | chr1 | 37928846 | 37930766 | 0.0334623 | chr1:03792 | 0.0334623 |
| STAG2 | 1527 | chrX | 122919322 | 122986516 | 0.0334702 | chrX:12292 | 0.0334702 |
| CCDC19 | 1531 | chr1 | 158134110 | 158138005 | 0.0334974 | chr1:15813 | 0.0334974 |
| C6orf15-PS | 1532 | chr6 | 31188399 | 31190561 | 0.0334976 | chr6:03119 | 0.0334976 |
| SLC6A5 | 1534 | chr11 | 20572145 | 20580290 | 0.0335235 | chr11:0205 | 0.0335235 |
| FAM119A | 1535 | chr2 | 208194873 | 208203795 | 0.0335324 | chr2:20820 | 0.0335324 |
| ZIC5-ZIC2 | 1536 | chr13 | 99422388 | 99431823 | 0.0335342 | chr13:0994 | 0.0335342 |
| MAOA | 1538 | chrX | 43394882 | 43402960 | 0.033538 | chrX:04339 | 0.033538 |
| NCSTN | 1542 | chr1 | 158574601 | 158580056 | 0.0335676 | chr1:15857 | 0.0335676 |
| NRG1 | 1547 | chr8 | 31611570 | 32627280 | 0.033586 | chr8:03252 | 0.033586 |
| DOK6 | 1551 | chr18 | 65215970 | 65221766 | 0.033602 | chr18:0652 | 0.033602 |
| CTSL2 | 1553 | chr9 | 98837767 | 98846906 | 0.0336269 | chr9:09884 | 0.0336269 |
| MAP3K5 | 1556 | chr6 | 137153022 | 137158517 | 0.0336382 | chr6:13715 | 0.0336382 |
| PLXNB1 | 1558 | chr3 | 48438556 | 48447225 | 0.0336478 | chr3:04844 | 0.0336478 |
| PAXIP1 | 1561 | chr7 | 154423186 | 154430609 | 0.0336749 | chr7:15442 | 0.0336749 |
| PGM2L1 | 1563 | chr11 | 73784525 | 73792569 | 0.0336786 | chr11:0737 | 0.0336786 |
| NFKB1 | 1569 | chr4 | 103636135 | 103643998 | 0.0337283 | chr4:10364 | 0.0337283 |
| CNKSR1 | 1575 | chr1 | 26370012 | 26388756 | 0.0337683 | chr1:02637 | 0.0337683 |

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|---|---|---|---|---|---|---|---|
| B3GALNT2 | 1576 | chr1 | 233731759 | 233739802 | 0.0337697 | chr1:23373 | 0.0337697 |
| SLC26A6 | 1579 | chr3 | 48638187 | 48648804 | 0.0337883 | chr3:04864 | 0.0337883 |
| RGAG4-LO | 1581 | chrX | 71268532 | 71270050 | 0.033794 | chrX:07126 | 0.033794 |
| ADRM1 | 1585 | chr20 | 60306020 | 60314495 | 0.0338377 | chr20:0603 | 0.0338377 |
| PDLIM4 | 1591 | chr5 | 131615815 | 131623830 | 0.0338585 | chr5:13162 | 0.0338585 |
| IFNA14 | 1593 | chr9 | 21228619 | 21235231 | 0.0338644 | chr9:02123 | 0.0338644 |
| PANK1 | 1606 | chr10 | 91341069 | 91400453 | 0.033972 | chr10:0913 | 0.033972 |
| ZNF77 | 1613 | chr19 | 2894223 | 2900639 | 0.0339997 | chr19:0028 | 0.0339997 |
| HEXA-C15c | 1617 | chr15 | 70455436 | 70455768 | 0.034018 | chr15:0704 | 0.034018 |
| HNRPH1 | 1618 | chr5 | 178980375 | 178987910 | 0.0340183 | chr5:17898 | 0.0340183 |
| SLC35A2 | 1621 | chrX | 48645393 | 48655319 | 0.034024 | chrX:04865 | 0.034024 |
| AGPAT2 | 1623 | chr9 | 138687250 | 138707169 | 0.0340309 | chr9:13870 | 0.0340309 |
| FLJ46831 | 1626 | chr10 | 129422307 | 129429186 | 0.034033 | chr10:1294 | 0.034033 |
| KCNH2 | 1628 | chr7 | 150281082 | 150309014 | 0.034046 | chr7:15028 | 0.034046 |
| THRAP6 | 1631 | chr8 | 118600735 | 118604599 | 0.0340615 | chr8:11860 | 0.0340615 |
| CDC2L6 | 1632 | chr6 | 111240626 | 111245215 | 0.0340821 | chr6:11124 | 0.0340821 |
| EFNA4 | 1634 | chr1 | 153302061 | 153305367 | 0.0340917 | chr1:15330 | 0.0340917 |
| ARTN | 1648 | chr1 | 44169426 | 44175206 | 0.0342053 | chr1:04417 | 0.0342053 |
| METRNL | 1650 | chr17 | 78625343 | 78633261 | 0.0342106 | chr17:0786 | 0.0342106 |
| GABRE | 1654 | chrX | 150875275 | 150898726 | 0.0342325 | chrX:15089 | 0.0342325 |
| PH-4 | 1657 | chr3 | 48998040 | 49019547 | 0.034248 | chr3:04900 | 0.034248 |
| CHMP2B | 1659 | chr3 | 87353793 | 87361830 | 0.0342555 | chr3:08735 | 0.0342555 |
| BICD1 | 1660 | chr12 | 32148701 | 32153940 | 0.0342566 | chr12:0321 | 0.0342566 |
| WDR90 | 1665 | chr16 | 638454 | 657842 | 0.0342749 | chr16:0006 | 0.0342749 |
| TBX4 | 1666 | chr17 | 56883121 | 56891144 | 0.0342767 | chr17:0568 | 0.0342767 |
| KIAA0895 | 1667 | chr7 | 36370564 | 36378759 | 0.0342778 | chr7:03637 | 0.0342778 |
| SUSD3 | 1675 | chr9 | 94855525 | 94863269 | 0.0343081 | chr9:09485 | 0.0343081 |
| EBF3 | 1677 | chr10 | 131649747 | 131657923 | 0.0343379 | chr10:1316 | 0.0343379 |
| RNF182 | 1678 | chr6 | 14027774 | 14035876 | 0.0343387 | chr6:01403 | 0.0343387 |
| hsa-mir-23b | 1683 | chr9 | 96881865 | 96887387 | 0.0343624 | chr9:09688 | 0.0343624 |
| HIF3A | 1688 | chr19 | 51486674 | 51538521 | 0.0343733 | chr19:0514 | 0.0343733 |
| ZNF79 | 1689 | chr9 | 129220985 | 129248408 | 0.0343756 | chr9:12922 | 0.0343756 |
| FLJ41993 | 1691 | chr22 | 48790740 | 48795589 | 0.0343806 | chr22:0487 | 0.0343806 |
| INHBE | 1692 | chr12 | 56131266 | 56137455 | 0.0343818 | chr12:0561 | 0.0343818 |
| SRRM1 | 1700 | chr1 | 24837085 | 24844901 | 0.0344628 | chr1:02484 | 0.0344628 |
| MKX | 1701 | chr10 | 28072321 | 28079726 | 0.0344642 | chr10:0280 | 0.0344642 |
| UBE3A | 1706 | chr15 | 23202679 | 23240263 | 0.0345057 | chr15:0232 | 0.0345057 |
| GPR148 | 1710 | chr2 | 131197798 | 131204899 | 0.0345323 | chr2:13120 | 0.0345323 |
| TNNT3 | 1716 | chr11 | 1895333 | 1903107 | 0.0345464 | chr11:0018 | 0.0345464 |
| POLM | 1724 | chr7 | 44086190 | 44094135 | 0.0345646 | chr7:04409 | 0.0345646 |
| LOC91461 | 1730 | chr2 | 42123941 | 42131724 | 0.0346116 | chr2:04212 | 0.0346116 |
| LCE1D | 1744 | chr1 | 151027705 | 151036773 | 0.0347051 | chr1:15103 | 0.0347051 |
| SEC22C-SS | 1746 | chr3 | 42598594 | 42607292 | 0.0347198 | chr3:04259 | 0.0347198 |
| TMED7 | 1755 | chr5 | 114987087 | 114989633 | 0.0347791 | chr5:11498 | 0.0347791 |
| RTKN | 1757 | chr2 | 74517947 | 74525617 | 0.0347811 | chr2:07452 | 0.0347811 |
| PQBP1 | 1759 | chrX | 48635654 | 48645205 | 0.034799 | chrX:04863 | 0.034799 |
| ACA55 | 1760 | chr1 | 39811697 | 39814998 | 0.0348 | chr1:03981 | 0.0348 |
| ZZEF1-CYE | 1763 | chr17 | 3993175 | 3993223 | 0.0348277 | chr17:0039 | 0.0348277 |
| FAM92B | 1764 | chr16 | 83701015 | 83709037 | 0.0348286 | chr16:0837 | 0.0348286 |
| ARL6IP2 | 1769 | chr2 | 38455625 | 38462393 | 0.0348702 | chr2:03845 | 0.0348702 |
| FLJ32549 | 1780 | chr12 | 62900087 | 62904859 | 0.034948 | chr12:0629 | 0.034948 |
| C7orf47 | 1781 | chr7 | 99870374 | 99877531 | 0.0349541 | chr7:09987 | 0.0349541 |
| EPPB9 | 1785 | chr17 | 19203981 | 19210715 | 0.034973 | chr17:0192 | 0.034973 |
| PNPO | 1788 | chr17 | 43368599 | 43376359 | 0.0349893 | chr17:0433 | 0.0349893 |
| SOX14 | 1799 | chr3 | 138961192 | 138968748 | 0.035071 | chr3:13896 | 0.035071 |
| KTI12 | 1802 | chr1 | 52270213 | 52274115 | 0.0350839 | chr1:05227 | 0.0350839 |
| FBXO30 | 1812 | chr6 | 146175187 | 146183081 | 0.0351258 | chr6:14617 | 0.0351258 |
| IHPK3 | 1816 | chr6 | 33820354 | 33828117 | 0.0351603 | chr6:03382 | 0.0351603 |

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|---|---|---|---|---|---|---|---|
| PRR16 | 1827 | chr5 | 119822888 | 119847289 | 0.0351987 | chr5:119827 | 0.0351987 |
| ERCC1 | 1828 | chr19 | 50616065 | 50624236 | 0.0352167 | chr19:0506 | 0.0352167 |
| XKRX | 1830 | chrX | 100068146 | 100075381 | 0.0352256 | chrX:10007 | 0.0352256 |
| ABCG5-AB | 1831 | chr2 | 43919523 | 43919567 | 0.0352388 | chr2:043919 | 0.0352388 |
| FOXA1 | 1839 | chr14 | 37131572 | 37139690 | 0.035272 | chr14:03713 | 0.035272 |
| IKZF3-ZPBI | 1842 | chr17 | 35274022 | 35278000 | 0.035279 | chr17:03527 | 0.035279 |
| FGF10 | 1843 | chr5 | 44422143 | 44429997 | 0.0352796 | chr5:044425 | 0.0352796 |
| MAP3K11 | 1847 | chr11 | 65121781 | 65143803 | 0.0352855 | chr11:06514 | 0.0352855 |
| HOXC9 | 1849 | chr12 | 52672030 | 52682719 | 0.0352918 | chr12:05267 | 0.0352918 |
| TTK | 1850 | chr6 | 80767736 | 80773547 | 0.0352922 | chr6:08077 | 0.0352922 |
| STK40 | 1851 | chr1 | 36597082 | 36629512 | 0.0352956 | chr1:03662 | 0.0352956 |
| BICD2 | 1857 | chr9 | 94564740 | 94569870 | 0.0353345 | chr9:094567 | 0.0353345 |
| DBH | 1860 | chr9 | 135486146 | 135493865 | 0.0353542 | chr9:135488 | 0.0353542 |
| ZZZ3 | 1861 | chr1 | 77873739 | 77926545 | 0.0353584 | chr1:07792 | 0.0353584 |
| TARDBP | 1862 | chr1 | 10992028 | 10997267 | 0.0353656 | chr1:01099 | 0.0353656 |
| KIF7 | 1868 | chr15 | 87990097 | 87997586 | 0.0354044 | chr15:0879 | 0.0354044 |
| SLC35E4 | 1876 | chr22 | 29356327 | 29363855 | 0.035461 | chr22:02936 | 0.035461 |
| SARDH | 1883 | chr9 | 135586839 | 135598168 | 0.0355112 | chr9:13559 | 0.0355112 |
| KRIT1 | 1893 | chr7 | 91706862 | 91718749 | 0.0355481 | chr7:09171 | 0.0355481 |
| MPPED2 | 1899 | chr11 | 30556225 | 30568471 | 0.035573 | chr11:03056 | 0.035573 |
| TBC1D5 | 1901 | chr3 | 17755174 | 17762840 | 0.035576 | chr3:017759 | 0.035576 |
| MRPL24 | 1910 | chr1 | 154975017 | 154978481 | 0.0356332 | chr1:154977 | 0.0356332 |
| U82 | 1915 | chr2 | 232034951 | 232037469 | 0.0356706 | chr2:232037 | 0.0356706 |
| LCORL | 1916 | chr4 | 17630174 | 17637977 | 0.0356744 | chr4:017633 | 0.0356744 |
| TMEM28 | 1924 | chrX | 68636311 | 68644279 | 0.0357064 | chrX:06864 | 0.0357064 |
| AMIGO2 | 1928 | chr12 | 45756525 | 45765530 | 0.0357273 | chr12:04576 | 0.0357273 |
| FGF9 | 1930 | chr13 | 21139810 | 21146427 | 0.0357369 | chr13:02114 | 0.0357369 |
| U61 | 1933 | chrX | 135789242 | 135790581 | 0.0357539 | chrX:13579 | 0.0357539 |
| PDE2A | 1938 | chr11 | 72001909 | 72068632 | 0.035828 | chr11:07206 | 0.035828 |
| XPR1 | 1940 | chr1 | 178862579 | 178870366 | 0.0358387 | chr1:178867 | 0.0358387 |
| RPL38 | 1943 | chr17 | 69705900 | 69717620 | 0.0358445 | chr17:0697 | 0.0358445 |
| SLC16A8 | 1945 | chr22 | 36806544 | 36810795 | 0.035854 | chr22:0368 | 0.035854 |
| MFI2 | 1946 | chr3 | 198238571 | 198246499 | 0.0358653 | chr3:198242 | 0.0358653 |
| PDF | 1948 | chr16 | 67919667 | 67930834 | 0.0359016 | chr16:0679 | 0.0359016 |
| LCK | 1949 | chr1 | 32488079 | 32515009 | 0.0359028 | chr1:032489 | 0.0359028 |
| C9orf106 | 1954 | chr9 | 131117670 | 131125354 | 0.0359338 | chr9:13112 | 0.0359338 |
| SEMA6C-TI | 1958 | chr1 | 149385840 | 149395642 | 0.0359667 | chr1:149386 | 0.0359667 |
| WDR5 | 1960 | chr9 | 135985825 | 135997279 | 0.0359959 | chr9:13599 | 0.0359959 |
| ALG2-SEC6 | 1961 | chr9 | 101024146 | 101024313 | 0.0360036 | chr9:10102 | 0.0360036 |
| AEBP1 | 1963 | chr7 | 44104962 | 44113145 | 0.0360101 | chr7:044108 | 0.0360101 |
| HSPC268 | 1966 | chr7 | 138676434 | 138678601 | 0.0360184 | chr7:13867 | 0.0360184 |
| ENTPD2 | 1968 | chr9 | 139062363 | 139072162 | 0.0360233 | chr9:13906 | 0.0360233 |
| TMED4 | 1972 | chr7 | 44585279 | 44592902 | 0.0360594 | chr7:044588 | 0.0360594 |
| UNC5A | 1976 | chr5 | 176166714 | 176172576 | 0.0360756 | chr5:17616 | 0.0360756 |
| CDH11 | 1979 | chr16 | 63593812 | 63718720 | 0.0360987 | chr16:0637 | 0.0360987 |
| ABCB6 | 1983 | chr2 | 219789358 | 219792281 | 0.0361015 | chr2:21979 | 0.0361015 |
| UCHL5IP | 1986 | chrX | 152386759 | 152394392 | 0.0361204 | chrX:15239 | 0.0361204 |
| CCL27 | 1992 | chr9 | 34651871 | 34658090 | 0.0361532 | chr9:03465 | 0.0361532 |
| CABC1 | 2006 | chr1 | 225190261 | 225197126 | 0.0362553 | chr1:22519 | 0.0362553 |
| ZNF403 | 2011 | chr17 | 31969582 | 32020341 | 0.0362739 | chr17:0319 | 0.0362739 |
| SDC1 | 2013 | chr2 | 20285700 | 20293454 | 0.0362835 | chr2:02028 | 0.0362835 |
| PROC | 2015 | chr2 | 127889156 | 127894938 | 0.0362872 | chr2:12789 | 0.0362872 |
| SLBP | 2016 | chr4 | 1682969 | 1687473 | 0.0362916 | chr4:00168 | 0.0362916 |
| SFT2D3 | 2018 | chr2 | 128169654 | 128177749 | 0.0363133 | chr2:12817 | 0.0363133 |
| FKBP14-PL | 2027 | chr7 | 30032790 | 30034727 | 0.0363681 | chr7:03003 | 0.0363681 |
| FLJ23834 | 2029 | chr7 | 105385443 | 105393000 | 0.0363749 | chr7:10538 | 0.0363749 |
| C9orf4 | 2036 | chr9 | 110967134 | 110974920 | 0.0364068 | chr9:11097 | 0.0364068 |
| BRSK2 | 2037 | chr11 | 1362300 | 1370165 | 0.0364097 | chr11:00136 | 0.0364097 |

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|---|---|---|---|---|---|---|---|
| BAK1 | 2047 | chr6 | 33651037 | 33661412 | 0.0364743 | chr6:033659 | 0.0364743 |
| SOS1 | 2055 | chr2 | 39199050 | 39206066 | 0.0365154 | chr2:039204 | 0.0365154 |
| C1orf156-C | 2065 | chr1 | 168030655 | 168031143 | 0.0365594 | chr1:168030 | 0.0365594 |
| SKIP | 2072 | chr17 | 1344606 | 228755439 | 0.0365953 | chr17:00136 | 0.0365953 |
| ZAP70 | 2079 | chr2 | 97691005 | 97709618 | 0.0366543 | chr2:097707 | 0.0366543 |
| CACNB3 | 2081 | chr12 | 47493819 | 47500901 | 0.0366658 | chr12:04749 | 0.0366658 |
| UFD1L-CDC | 2089 | chr22 | 17846749 | 17847434 | 0.0367015 | chr22:01784 | 0.0367015 |
| HYAL2 | 2091 | chr3 | 50330500 | 50337319 | 0.0367097 | chr3:050334 | 0.0367097 |
| HBII-108 | 2092 | chr3 | 52695042 | 52697644 | 0.0367117 | chr3:052695 | 0.0367117 |
| CRB2 | 2095 | chr9 | 125153123 | 125160620 | 0.0367287 | chr9:125157 | 0.0367287 |
| SLC39A4 | 2097 | chr8 | 145608664 | 145614809 | 0.036743 | chr8:145613 | 0.036743 |
| HAS1 | 2099 | chr19 | 56918136 | 56923804 | 0.0367503 | chr19:05692 | 0.0367503 |
| DMKN | 2101 | chr19 | 40693768 | 40699794 | 0.0367593 | chr19:04069 | 0.0367593 |
| FBLIM1 | 2112 | chr1 | 15952416 | 15966408 | 0.0368249 | chr1:015957 | 0.0368249 |
| IHPK1 | 2114 | chr3 | 49736707 | 49804354 | 0.0368279 | chr3:049799 | 0.0368279 |
| BRD1 | 2119 | chr22 | 48602388 | 48612800 | 0.0368453 | chr22:04860 | 0.0368453 |
| XPO6 | 2122 | chr16 | 28129110 | 28135557 | 0.0368549 | chr16:02813 | 0.0368549 |
| VPS36-CKA | 2123 | chr13 | 51922781 | 51927572 | 0.0368591 | chr13:05192 | 0.0368591 |
| EBF1 | 2127 | chr5 | 158456725 | 158464864 | 0.036879 | chr5:158461 | 0.036879 |
| NFKBIA | 2128 | chr14 | 34941215 | 34948891 | 0.0368886 | chr14:03494 | 0.0368886 |
| NEGR1 | 2130 | chr1 | 72518377 | 72526370 | 0.036905 | chr1:072521 | 0.036905 |
| ACOX1 | 2142 | chr17 | 71481389 | 71488504 | 0.036997 | chr17:07148 | 0.036997 |
| FLJ21839 | 2143 | chr2 | 27122605 | 27130562 | 0.0370035 | chr2:027126 | 0.0370035 |
| CASP8 | 2146 | chr2 | 201803472 | 201840886 | 0.0370197 | chr2:201805 | 0.0370197 |
| FOXD3 | 2149 | chr1 | 63555964 | 63563692 | 0.0370295 | chr1:063560 | 0.0370295 |
| CACNG2 | 2150 | chr22 | 35426134 | 35432824 | 0.0370352 | chr22:03542 | 0.0370352 |
| TRIM45 | 2153 | chr1 | 117463345 | 117471266 | 0.0370468 | chr1:117466 | 0.0370468 |
| AQP1 | 2155 | chr7 | 30912579 | 30920458 | 0.0370482 | chr7:030913 | 0.0370482 |
| KIAA1446 | 2164 | chr14 | 100103426 | 100111302 | 0.03708 | chr14:10010 | 0.03708 |
| MAP6 | 2167 | chr11 | 75054638 | 75060144 | 0.0370949 | chr11:07505 | 0.0370949 |
| MTHFSD | 2173 | chr16 | 85143815 | 85148458 | 0.0371413 | chr16:08514 | 0.0371413 |
| MIZF | 2184 | chr11 | 118493219 | 118499454 | 0.037195 | chr11:11849 | 0.037195 |
| ACSL6 | 2197 | chr5 | 131372998 | 131380764 | 0.0372611 | chr5:131375 | 0.0372611 |
| CPEB4 | 2199 | chr5 | 173243359 | 173255128 | 0.0372723 | chr5:173247 | 0.0372723 |
| BAT3-APOM | 2201 | chr6 | 31728497 | 31731567 | 0.0372753 | chr6:031728 | 0.0372753 |
| RSBN1L | 2211 | chr7 | 77159446 | 77166088 | 0.0373334 | chr7:077163 | 0.0373334 |
| CDC42EP2 | 2216 | chr11 | 64834071 | 64846851 | 0.0373837 | chr11:06483 | 0.0373837 |
| SNCAIP | 2229 | chr5 | 121670574 | 121678315 | 0.0374287 | chr5:121675 | 0.0374287 |
| XRCC5 | 2239 | chr2 | 216676979 | 216683912 | 0.0374762 | chr2:21668 | 0.0374762 |
| CYTL1 | 2242 | chr4 | 5069675 | 5077229 | 0.0374823 | chr4:005072 | 0.0374823 |
| CLK3 | 2257 | chr15 | 72682407 | 72697740 | 0.0375696 | chr15:07268 | 0.0375696 |
| NR5A1 | 2259 | chr9 | 126307114 | 126314999 | 0.037577 | chr9:126310 | 0.037577 |
| WNK1 | 2260 | chr12 | 729075 | 735519 | 0.0375778 | chr12:00073 | 0.0375778 |
| DEADC1-PI | 2263 | chr6 | 143813576 | 143813764 | 0.0376004 | chr6:143813 | 0.0376004 |
| BACH2 | 2265 | chr6 | 91060808 | 91068712 | 0.0376046 | chr6:091063 | 0.0376046 |
| ATP8B2 | 2271 | chr1 | 152564400 | 152570395 | 0.0376257 | chr1:152565 | 0.0376257 |
| KCNQ4 | 2281 | chr1 | 41016955 | 41024847 | 0.0376896 | chr1:041017 | 0.0376896 |
| PRLH | 2288 | chr2 | 238134584 | 238142021 | 0.0377195 | chr2:238137 | 0.0377195 |
| DKFZP434E | 2291 | chr7 | 97717226 | 97724320 | 0.037736 | chr7:097719 | 0.037736 |
| hsa-mir-200 | 2293 | chr12 | 6941254 | 6943172 | 0.0377427 | chr12:00694 | 0.0377427 |
| RAB33B | 2295 | chr4 | 140590533 | 140597269 | 0.0377533 | chr4:140594 | 0.0377533 |
| ERCC6 | 2298 | chr10 | 50414818 | 50421257 | 0.0377775 | chr10:05041 | 0.0377775 |
| HOXC12 | 2301 | chr12 | 52629619 | 52637412 | 0.0377953 | chr12:05262 | 0.0377953 |
| SLC34A2 | 2302 | chr4 | 25262173 | 25268492 | 0.0377959 | chr4:025265 | 0.0377959 |
| RBM35B-LY | 2304 | chr16 | 66827645 | 66836694 | 0.0377971 | chr16:06682 | 0.0377971 |
| CD300LG | 2307 | chr17 | 39275146 | 39282481 | 0.037803 | chr17:03928 | 0.037803 |
| ACTG1 | 2330 | chr17 | 77091566 | 77099924 | 0.0379155 | chr17:07709 | 0.0379155 |
| AFF2 | 2333 | chrX | 147384489 | 147392747 | 0.0379364 | chrX:14738 | 0.0379364 |

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|---|---|---|---|---|---|---|---|
| SERAC1-G | 2341 | chr6 | 158509323 | 158511498 | 0.0379817 | chr6:15850 | 0.0379817 |
| ARHGEF2 | 2343 | chr1 | 154212204 | 154220445 | 0.037984 | chr1:15421 | 0.037984 |
| WDR45 | 2352 | chrX | 48819479 | 48849636 | 0.038007 | chrX:04882 | 0.038007 |
| H1FX-C3orf | 2354 | chr3 | 130517842 | 130519667 | 0.0380117 | chr3:13051 | 0.0380117 |
| HMX2 | 2358 | chr10 | 124892389 | 124900106 | 0.0380316 | chr10:1248 | 0.0380316 |
| TCIRG1 | 2360 | chr11 | 67560760 | 67565506 | 0.038039 | chr11:0675 | 0.038039 |
| HOXD3 | 2371 | chr2 | 176727043 | 176744441 | 0.038092 | chr2:17673 | 0.038092 |
| RAG1AP1 | 2377 | chr1 | 153374071 | 153378150 | 0.0381066 | chr1:15337 | 0.0381066 |
| FAM19A4 | 2380 | chr3 | 69062038 | 69069515 | 0.0381237 | chr3:06906 | 0.0381237 |
| hsa-mir-218 | 2382 | chr5 | 168125318 | 168133304 | 0.0381382 | chr5:16813 | 0.0381382 |
| EVX2-HOXI | 2383 | chr2 | 176660654 | 176665530 | 0.0381394 | chr2:17666 | 0.0381394 |
| GTF3C2 | 2388 | chr2 | 27402507 | 27435035 | 0.0381545 | chr2:02743 | 0.0381545 |
| RPS13 | 2389 | chr11 | 17055785 | 17059389 | 0.0381616 | chr11:0170 | 0.0381616 |
| FAM120C | 2392 | chrX | 54224052 | 54231799 | 0.0381835 | chrX:05422 | 0.0381835 |
| MCM7-AP4 | 2397 | chr7 | 99536336 | 99537032 | 0.0382197 | chr7:09953 | 0.0382197 |
| C6orf62 | 2407 | chr6 | 24824580 | 24832907 | 0.0382452 | chr6:02482 | 0.0382452 |
| LOC340602 | 2419 | chrX | 51161816 | 51169018 | 0.0383202 | chrX:05116 | 0.0383202 |
| ZH2C2-HIS | 2421 | chr5 | 102483789 | 102492875 | 0.0383359 | chr5:10248 | 0.0383359 |
| TCEA2 | 2424 | chr20 | 62159074 | 62170797 | 0.0383544 | chr20:0621 | 0.0383544 |
| VCP | 2425 | chr9 | 35060027 | 35063676 | 0.0383686 | chr9:03506 | 0.0383686 |
| TEAD3 | 2430 | chr6 | 35570355 | 35573651 | 0.0383977 | chr6:03557 | 0.0383977 |
| NDRG4 | 2431 | chr16 | 57049964 | 57104964 | 0.0383996 | chr16:0570 | 0.0383996 |
| RIPK5 | 2441 | chr1 | 203444848 | 203451883 | 0.0384625 | chr1:20344 | 0.0384625 |
| NUCKS1 | 2452 | chr1 | 203983296 | 203991055 | 0.0385189 | chr1:20398 | 0.0385189 |
| G3BP1 | 2453 | chr5 | 151128697 | 151134202 | 0.0385272 | chr5:15113 | 0.0385272 |
| AXIIR | 2460 | chr5 | 43072837 | 43081243 | 0.038557 | chr5:04307 | 0.038557 |
| RIC8B | 2472 | chr12 | 105687190 | 105694723 | 0.0386549 | chr12:1056 | 0.0386549 |
| C4orf15 | 2474 | chr4 | 2200333 | 2218985 | 0.0386643 | chr4:00221 | 0.0386643 |
| BARHL1 | 2477 | chr9 | 134442307 | 134450406 | 0.0386711 | chr9:13444 | 0.0386711 |
| IGF2BP3 | 2480 | chr7 | 23473818 | 23481990 | 0.0386836 | chr7:02347 | 0.0386836 |
| DGCR2 | 2484 | chr22 | 17487418 | 17497679 | 0.0387052 | chr22:0174 | 0.0387052 |
| PEX1-DKFZ | 2486 | chr7 | 91995822 | 91996023 | 0.0387065 | chr7:09199 | 0.0387065 |
| C9orf93 | 2487 | chr9 | 15538929 | 15545425 | 0.0387076 | chr9:01554 | 0.0387076 |
| UNQ5830 | 2488 | chr2 | 10061189 | 10068048 | 0.0387078 | chr2:01006 | 0.0387078 |
| TRERF1 | 2489 | chr6 | 42524782 | 42532820 | 0.0387084 | chr6:04252 | 0.0387084 |
| MCM7 | 2492 | chr7 | 99528068 | 99542545 | 0.038728 | chr7:09954 | 0.038728 |
| EIF3S7 | 2495 | chr22 | 35236853 | 35260456 | 0.0387415 | chr22:0352 | 0.0387415 |
| FLJ37440 | 2497 | chr2 | 112608311 | 112615167 | 0.0387452 | chr2:11261 | 0.0387452 |
| LY6D | 2499 | chr8 | 143863302 | 143869863 | 0.0387562 | chr8:14386 | 0.0387562 |
| TSPAN18 | 2510 | chr11 | 44833211 | 44886572 | 0.0388009 | chr11:0448 | 0.0388009 |
| GNB1 | 2513 | chr1 | 1744644 | 1817599 | 0.0388248 | chr1:00181 | 0.0388248 |
| FLJ44861 | 2520 | chr17 | 76748398 | 76756425 | 0.0388463 | chr17:0767 | 0.0388463 |
| TRIM17 | 2522 | chr1 | 226662339 | 226679173 | 0.0388498 | chr1:22667 | 0.0388498 |
| VIPR1 | 2530 | chr3 | 42513623 | 42521665 | 0.0388858 | chr3:04251 | 0.0388858 |
| CHST12 | 2537 | chr7 | 2404707 | 2440621 | 0.0389153 | chr7:00240 | 0.0389153 |
| HTATSF1 | 2540 | chrX | 135402324 | 135409951 | 0.0389264 | chrX:13540 | 0.0389264 |
| APRIN | 2544 | chr13 | 32053125 | 32061168 | 0.0389437 | chr13:0320 | 0.0389437 |
| VPS13B | 2554 | chr8 | 100090481 | 100096515 | 0.0390213 | chr8:10009 | 0.0390213 |
| MEF2D | 2569 | chr1 | 154717364 | 154742398 | 0.0391173 | chr1:15474 | 0.0391173 |
| ING1 | 2579 | chr13 | 110163088 | 110167820 | 0.0391422 | chr13:1101 | 0.0391422 |
| SIM2 | 2581 | chr21 | 36988609 | 36996338 | 0.0391498 | chr21:0369 | 0.0391498 |
| SERPINE1 | 2588 | chr7 | 100551960 | 100558898 | 0.0391899 | chr7:10055 | 0.0391899 |
| RNASEL | 2589 | chr1 | 180820251 | 180826183 | 0.039195 | chr1:18082 | 0.039195 |
| CAPNS1 | 2601 | chr19 | 41317575 | 41333306 | 0.0392919 | chr19:0413 | 0.0392919 |
| hsa-mir-143 | 2614 | chr5 | 148783524 | 148788778 | 0.0393887 | chr5:14878 | 0.0393887 |
| MMP2 | 2615 | chr16 | 54066858 | 54097894 | 0.039391 | chr16:0540 | 0.039391 |
| LEMD3 | 2617 | chr12 | 63844628 | 63851990 | 0.0393997 | chr12:0638 | 0.0393997 |
| RPL39 | 2624 | chrX | 118809631 | 118814475 | 0.039468 | chrX:11880 | 0.039468 |

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|---|---|---|---|---|---|---|---|
| PRDM14 | 2626 | chr8 | 71143915 | 71151411 | 0.0394996 | chr8:071146 | 0.0394996 |
| PIGM | 2627 | chr1 | 158265744 | 158273878 | 0.0395018 | chr1:158268 | 0.0395018 |
| TSPYL1 | 2628 | chr6 | 116702581 | 116711998 | 0.0395041 | chr6:116707 | 0.0395041 |
| hsa-mir-202 | 2631 | chr10 | 134908604 | 134916177 | 0.0395139 | chr10:1349 | 0.0395139 |
| AARSD1-RI | 2636 | chr17 | 38385681 | 38385847 | 0.0395285 | chr17:0383 | 0.0395285 |
| PDE11A | 2641 | chr2 | 178196195 | 178681290 | 0.0395559 | chr2:17864 | 0.0395559 |
| KCNIP3 | 2643 | chr2 | 95321487 | 95329375 | 0.0395632 | chr2:09532 | 0.0395632 |
| PANK4 | 2645 | chr1 | 2445429 | 2449738 | 0.0395789 | chr1:00244 | 0.0395789 |
| RPS7 | 2646 | chr2 | 3595508 | 3603559 | 0.039581 | chr2:00360 | 0.039581 |
| SEMA4C | 2648 | chr2 | 96889200 | 96904894 | 0.0395858 | chr2:09690 | 0.0395858 |
| LOC343521 | 2651 | chr1 | 45044406 | 45050610 | 0.0396164 | chr1:04504 | 0.0396164 |
| GAL3ST2 | 2652 | chr2 | 242359723 | 242366574 | 0.0396202 | chr2:24236 | 0.0396202 |
| TMEM130-T | 2653 | chr7 | 98305761 | 98313939 | 0.0396246 | chr7:09831 | 0.0396246 |
| GPR68 | 2658 | chr14 | 90768674 | 90795188 | 0.0396462 | chr14:0907 | 0.0396462 |
| NVL | 2662 | chr1 | 222583863 | 222589865 | 0.0396586 | chr1:22258 | 0.0396586 |
| CLDN15 | 2673 | chr7 | 100665187 | 100669457 | 0.0397135 | chr7:10066 | 0.0397135 |
| MCF2L2 | 2677 | chr3 | 184626030 | 184632972 | 0.0397235 | chr3:18462 | 0.0397235 |
| C2orf50 | 2683 | chr2 | 11186272 | 11194583 | 0.0397565 | chr2:01118 | 0.0397565 |
| U73b | 2684 | chr4 | 152240306 | 152242121 | 0.0397583 | chr4:15224 | 0.0397583 |
| CASP9-DN/ | 2687 | chr1 | 15723798 | 15725873 | 0.0397686 | chr1:01572 | 0.0397686 |
| COG8-NIP7 | 2688 | chr16 | 67931010 | 67931060 | 0.0397709 | chr16:0679 | 0.0397709 |
| HSP90AB1 | 2693 | chr6 | 44318300 | 44324713 | 0.0398047 | chr6:04432 | 0.0398047 |
| FLJ45717 | 2697 | chr1 | 245341314 | 245345764 | 0.0398239 | chr1:24534 | 0.0398239 |
| hsa-mir-500 | 2703 | chrX | 49655023 | 49659662 | 0.0398333 | chrX:04965 | 0.0398333 |
| G6PD | 2709 | chrX | 153420432 | 153428883 | 0.039853 | chrX:15342 | 0.039853 |
| CDKN2AIP | 2721 | chr4 | 184597900 | 184605369 | 0.0399371 | chr4:18460 | 0.0399371 |
| CLU | 2725 | chr8 | 27521826 | 27533337 | 0.0399465 | chr8:02752 | 0.0399465 |
| CAPN5 | 2732 | chr11 | 76451892 | 76494054 | 0.0399745 | chr11:0764 | 0.0399745 |
| SIN3A | 2741 | chr15 | 73450398 | 73536494 | 0.0399997 | chr15:0735 | 0.0399997 |
| PRKCH | 2746 | chr14 | 60852845 | 60860987 | 0.0400309 | chr14:0608 | 0.0400309 |
| ZNF307-C6 | 2748 | chr6 | 28327956 | 28334952 | 0.0400501 | chr6:02832 | 0.0400501 |
| MEIS2 | 2760 | chr15 | 35176397 | 35185975 | 0.0401169 | chr15:0351 | 0.0401169 |
| ALS2CR4 | 2762 | chr2 | 202193153 | 202217754 | 0.0401181 | chr2:20221 | 0.0401181 |
| TUBB2A | 2764 | chr6 | 3101973 | 3108275 | 0.0401214 | chr6:00310 | 0.0401214 |
| GTF2I | 2768 | chr7 | 73705451 | 73712425 | 0.0401371 | chr7:07370 | 0.0401371 |
| ICT1 | 2776 | chr17 | 70515625 | 70520950 | 0.0401699 | chr17:0705 | 0.0401699 |
| MAP4K3 | 2777 | chr2 | 39515698 | 39522515 | 0.0401702 | chr2:03951 | 0.0401702 |
| SYMPK-FO | 2803 | chr19 | 51058452 | 51059331 | 0.0402954 | chr19:0510 | 0.0402954 |
| hsa-mir-185 | 2807 | chr22 | 18390728 | 18400575 | 0.0403128 | chr22:0184 | 0.0403128 |
| KIAA1622 | 2808 | chr14 | 93707623 | 93713050 | 0.0403202 | chr14:0937 | 0.0403202 |
| CRLF1-C19 | 2809 | chr19 | 18578809 | 18584682 | 0.0403235 | chr19:0185 | 0.0403235 |
| GK | 2810 | chrX | 30575887 | 30584025 | 0.0403259 | chrX:03058 | 0.0403259 |
| GPC3 | 2813 | chrX | 132944673 | 132951433 | 0.0403553 | chrX:13294 | 0.0403553 |
| GLI4 | 2817 | chr8 | 144416419 | 144423363 | 0.0403785 | chr8:14441 | 0.0403785 |
| GRPEL2 | 2826 | chr5 | 148702330 | 148713142 | 0.0404287 | chr5:14870 | 0.0404287 |
| SMPD1 | 2827 | chr11 | 6362708 | 6370900 | 0.0404331 | chr11:0063 | 0.0404331 |
| SMARCAD | 2835 | chr4 | 95342588 | 95350747 | 0.0404574 | chr4:09534 | 0.0404574 |
| ABL1 | 2837 | chr9 | 132574068 | 132703177 | 0.0404713 | chr9:13269 | 0.0404713 |
| ZNF260 | 2854 | chr19 | 41708611 | 41716300 | 0.0405784 | chr19:0417 | 0.0405784 |
| PRDM13 | 2871 | chr6 | 100156309 | 100164103 | 0.0406597 | chr6:10015 | 0.0406597 |
| ZFAND3 | 2873 | chr6 | 37890271 | 37898216 | 0.0406777 | chr6:03789 | 0.0406777 |
| COX7A2L | 2876 | chr2 | 42439330 | 42446695 | 0.0406854 | chr2:04244 | 0.0406854 |
| CRABP1 | 2883 | chr15 | 76416097 | 76422261 | 0.0407295 | chr15:0764 | 0.0407295 |
| TLE3 | 2891 | chr15 | 68173699 | 68182765 | 0.0407709 | chr15:0681 | 0.0407709 |
| GNAL | 2897 | chr18 | 11677388 | 11843760 | 0.0408039 | chr18:0116 | 0.0408039 |
| CCR7 | 2900 | chr17 | 35972703 | 35975405 | 0.0408138 | chr17:0359 | 0.0408138 |
| GPRC5B | 2905 | chr16 | 19801180 | 19809142 | 0.0408558 | chr16:0198 | 0.0408558 |
| ADCY5 | 2914 | chr3 | 124648015 | 124655504 | 0.0409041 | chr3:12465 | 0.0409041 |

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|---|---|---|---|---|---|---|---|
| CERK | 2916 | chr22 | 45510213 | 45517890 | 0.0409188 | chr22:0455 | 0.0409188 |
| MFSD2 | 2921 | chr1 | 40192194 | 40196013 | 0.0409433 | chr1:040192 | 0.0409433 |
| LDB1 | 2929 | chr10 | 103862209 | 103870215 | 0.0409759 | chr10:10386 | 0.0409759 |
| GLTSCR2 | 2940 | chr19 | 52938374 | 52940631 | 0.0410312 | chr19:05293 | 0.0410312 |
| TBC1D23 | 2950 | chr3 | 101457097 | 101463735 | 0.041067 | chr3:101462 | 0.041067 |
| MORF4L2 | 2952 | chrX | 102825764 | 102833759 | 0.0410746 | chrX:10282 | 0.0410746 |
| CEACAM4 | 2953 | chr19 | 46823275 | 46830578 | 0.0410789 | chr19:04682 | 0.0410789 |
| CRKRS | 2955 | chr17 | 34871125 | 34874380 | 0.041083 | chr17:03487 | 0.041083 |
| VIL1 | 2960 | chr2 | 218991401 | 218999200 | 0.0410951 | chr2:21899 | 0.0410951 |
| EMX1 | 2965 | chr2 | 72994111 | 73000995 | 0.0411143 | chr2:072997 | 0.0411143 |
| RBM15 | 2970 | chr1 | 110677832 | 110686027 | 0.0411337 | chr1:110682 | 0.0411337 |
| TBC1D16 | 2985 | chr17 | 75536846 | 75629466 | 0.0412146 | chr17:07562 | 0.0412146 |
| THBD | 2993 | chr20 | 22975907 | 22982857 | 0.0412456 | chr20:02297 | 0.0412456 |
| NPC1L1 | 2994 | chr7 | 44544934 | 44551390 | 0.0412492 | chr7:044548 | 0.0412492 |
| MFNG | 2999 | chr22 | 36209936 | 36216008 | 0.0412794 | chr22:0362 | 0.0412794 |
| GNAI3 | 3009 | chr1 | 109889954 | 109938498 | 0.0413379 | chr1:10989 | 0.0413379 |
| RPL24 | 3011 | chr3 | 102882847 | 102893341 | 0.0413562 | chr3:10288 | 0.0413562 |
| C1orf74 | 3013 | chr1 | 208022337 | 208027888 | 0.0413618 | chr1:20802 | 0.0413618 |
| HAP1 | 3016 | chr17 | 37142033 | 37149847 | 0.0413706 | chr17:0371 | 0.0413706 |
| FAM83A | 3020 | chr8 | 124258798 | 124266718 | 0.04138 | chr8:12426 | 0.04138 |
| TXN | 3026 | chr9 | 112056113 | 112062562 | 0.0414158 | chr9:11205 | 0.0414158 |
| C14orf106 | 3028 | chr14 | 44786002 | 44796158 | 0.04142 | chr14:0447 | 0.04142 |
| PSMD14 | 3029 | chr2 | 161867333 | 161976148 | 0.0414244 | chr2:16187 | 0.0414244 |
| TM6SF2 | 3033 | chr19 | 19236154 | 19250647 | 0.0414588 | chr19:0192 | 0.0414588 |
| ALS2CL-TM | 3037 | chr3 | 46710426 | 46717692 | 0.041476 | chr3:04671 | 0.041476 |
| WNT5A | 3041 | chr3 | 55493875 | 55501767 | 0.0414948 | chr3:05549 | 0.0414948 |
| BNC1 | 3042 | chr15 | 81741872 | 81749965 | 0.0414956 | chr15:0817 | 0.0414956 |
| RORC | 3043 | chr1 | 150045290 | 150076401 | 0.0415015 | chr1:15007 | 0.0415015 |
| CLCF1 | 3047 | chr11 | 66895223 | 66903243 | 0.0415125 | chr11:0668 | 0.0415125 |
| CCKBR | 3051 | chr11 | 6233967 | 6239583 | 0.0415329 | chr11:0062 | 0.0415329 |
| ESD | 3060 | chr13 | 46267064 | 46274884 | 0.0415938 | chr13:0462 | 0.0415938 |
| STAB1 | 3062 | chr3 | 52502326 | 52505867 | 0.0415968 | chr3:05250 | 0.0415968 |
| SLC2A11 | 3074 | chr22 | 22524899 | 22532315 | 0.0416572 | chr22:0225 | 0.0416572 |
| PLEKHG2 | 3077 | chr19 | 44591939 | 44597996 | 0.0416672 | chr19:0445 | 0.0416672 |
| ANXA4 | 3078 | chr2 | 69820681 | 69907105 | 0.0416687 | chr2:06982 | 0.0416687 |
| FATE1 | 3082 | chrX | 150629874 | 150637650 | 0.0416881 | chrX:15063 | 0.0416881 |
| LRRC3B | 3095 | chr3 | 26633912 | 26641740 | 0.0417398 | chr3:02663 | 0.0417398 |
| NNT | 3098 | chr5 | 43634064 | 43641592 | 0.0417505 | chr5:04363 | 0.0417505 |
| ANP32B | 3102 | chr9 | 99780413 | 99787910 | 0.0417668 | chr9:09978 | 0.0417668 |
| RAX | 3106 | chr18 | 55088962 | 55097110 | 0.0418036 | chr18:0550 | 0.0418036 |
| KIAA1012 | 3108 | chr18 | 27775033 | 27782083 | 0.0418181 | chr18:0277 | 0.0418181 |
| TITF1 | 3109 | chr14 | 36055810 | 36064595 | 0.0418212 | chr14:0360 | 0.0418212 |
| FNDC1 | 3111 | chr6 | 159504965 | 159512756 | 0.0418443 | chr6:15950 | 0.0418443 |
| TAF4 | 3116 | chr20 | 60071795 | 60078916 | 0.0418657 | chr20:0600 | 0.0418657 |
| LOC389827 | 3118 | chr9 | 135384487 | 135389623 | 0.0418786 | chr9:13538 | 0.0418786 |
| DIO3 | 3120 | chr14 | 101092190 | 101099912 | 0.0419013 | chr14:1010 | 0.0419013 |
| SLC20A1 | 3125 | chr2 | 113114545 | 113123375 | 0.0419533 | chr2:11311 | 0.0419533 |
| JDP2 | 3126 | chr14 | 74963138 | 74971119 | 0.0419576 | chr14:0749 | 0.0419576 |
| TXN2 | 3128 | chr22 | 35204337 | 35209959 | 0.0419639 | chr22:0352 | 0.0419639 |
| NCAM2 | 3130 | chr21 | 21287054 | 21294950 | 0.0419678 | chr21:0212 | 0.0419678 |
| MEGF8 | 3131 | chr19 | 47529095 | 47572896 | 0.0419691 | chr19:0475 | 0.0419691 |
| TBX2 | 3132 | chr17 | 56826799 | 56841615 | 0.0419708 | chr17:0568 | 0.0419708 |
| MAP2K7 | 3142 | chr19 | 7873549 | 7877078 | 0.0419992 | chr19:0078 | 0.0419992 |
| C19orf26-A | 3146 | chr19 | 1188836 | 1192679 | 0.0420329 | chr19:0011 | 0.0420329 |
| SHH | 3149 | chr7 | 155295119 | 155302888 | 0.0420376 | chr7:15529 | 0.0420376 |
| KIAA0319 | 3157 | chr6 | 24752990 | 24758069 | 0.0420872 | chr6:02475 | 0.0420872 |
| SLC25A1 | 3159 | chr22 | 17543797 | 17551697 | 0.0420995 | chr22:0175 | 0.0420995 |
| CAMSAP1L | 3166 | chr1 | 198969956 | 198977519 | 0.0421295 | chr1:19897 | 0.0421295 |

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|---|---|---|---|---|---|---|---|
| PCMTD2 | 3176 | chr20 | 62356062 | 62364281 | 0.0421787 | chr20:0623 | 0.0421787 |
| SLC6A8 | 3178 | chrX | 152603219 | 152609607 | 0.0421837 | chrX:15260 | 0.0421837 |
| ZNF197 | 3188 | chr3 | 44636166 | 44662507 | 0.0422359 | chr3:04464 | 0.0422359 |
| C1orf126-TI | 3190 | chr1 | 15351622 | 15352803 | 0.0422496 | chr1:01535 | 0.0422496 |
| STAT5B | 3192 | chr17 | 37604722 | 37683098 | 0.0422808 | chr17:0376 | 0.0422808 |
| BET1L-RIC | 3231 | chr11 | 197457 | 198108 | 0.0424718 | chr11:0001 | 0.0424718 |
| GJB4 | 3232 | chr1 | 34996851 | 35001933 | 0.0424737 | chr1:03499 | 0.0424737 |
| ABCC3 | 3237 | chr17 | 46061792 | 46069714 | 0.0425035 | chr17:0460 | 0.0425035 |
| MUC4 | 3239 | chr3 | 197020573 | 197028968 | 0.0425131 | chr3:19702 | 0.0425131 |
| HOXD11 | 3245 | chr2 | 176673761 | 176682573 | 0.0425371 | chr2:17667 | 0.0425371 |
| TSLP | 3248 | chr5 | 110428192 | 110439088 | 0.0425392 | chr5:11043 | 0.0425392 |
| NLRP12 | 3260 | chr19 | 58999087 | 59024599 | 0.042602 | chr19:0590 | 0.042602 |
| FASN | 3271 | chr17 | 77646940 | 77654797 | 0.0426394 | chr17:0776 | 0.0426394 |
| CREM | 3275 | chr10 | 35451021 | 35526783 | 0.0426564 | chr10:0354 | 0.0426564 |
| GTF2F1 | 3278 | chr19 | 6331203 | 6349226 | 0.0426647 | chr19:0063 | 0.0426647 |
| SCARF2 | 3279 | chr22 | 19120601 | 19127280 | 0.0426657 | chr22:0191 | 0.0426657 |
| KCNK16 | 3280 | chr6 | 39390619 | 39403784 | 0.0426719 | chr6:03939 | 0.0426719 |
| TSPAN5 | 3287 | chr4 | 99796260 | 99804125 | 0.0427528 | chr4:09980 | 0.0427528 |
| RAP1B | 3291 | chr12 | 67285441 | 67330852 | 0.042768 | chr12:0672 | 0.042768 |
| SLC16A6 | 3292 | chr17 | 63796473 | 63804475 | 0.0427723 | chr17:0638 | 0.0427723 |
| C10orf27 | 3302 | chr10 | 72212753 | 72216948 | 0.0428295 | chr10:0722 | 0.0428295 |
| APOBEC3A | 3307 | chr22 | 37678152 | 37686146 | 0.042841 | chr22:0376 | 0.042841 |
| LZTR1 | 3311 | chr22 | 19665738 | 19683642 | 0.0428707 | chr22:0196 | 0.0428707 |
| HDAC10 | 3314 | chr22 | 49026136 | 49033245 | 0.0428885 | chr22:0490 | 0.0428885 |
| ANKHD1 | 3316 | chr5 | 139756264 | 139888250 | 0.0428932 | chr5:13976 | 0.0428932 |
| ZFAND6 | 3318 | chr15 | 78137727 | 78141606 | 0.0428965 | chr15:0781 | 0.0428965 |
| RAB34-RPL | 3319 | chr17 | 24068998 | 24071037 | 0.0429081 | chr17:0240 | 0.0429081 |
| ZNF621 | 3321 | chr3 | 40538255 | 40543072 | 0.0429153 | chr3:04054 | 0.0429153 |
| GAS2L1 | 3322 | chr22 | 28027520 | 28038790 | 0.0429202 | chr22:0280 | 0.0429202 |
| SNTB1 | 3324 | chr8 | 121890843 | 121899150 | 0.0429268 | chr8:12189 | 0.0429268 |
| KLHDC7B | 3325 | chr22 | 49327884 | 49336208 | 0.0429272 | chr22:0493 | 0.0429272 |
| LILRA3 | 3331 | chr19 | 59493579 | 59501529 | 0.0429449 | chr19:0594 | 0.0429449 |
| TBCCD1-DI | 3340 | chr3 | 187767929 | 187771077 | 0.0429803 | chr3:18776 | 0.0429803 |
| C6orf134 | 3343 | chr6 | 30702205 | 30722576 | 0.042994 | chr6:03070 | 0.042994 |
| hsa-mir-594 | 3345 | chr7 | 138671206 | 138675926 | 0.0430189 | chr7:13867 | 0.0430189 |
| KLHL30 | 3351 | chr2 | 238708684 | 238716605 | 0.0430618 | chr2:23871 | 0.0430618 |
| NFATC1 | 3357 | chr18 | 75253029 | 75263841 | 0.0431055 | chr18:0752 | 0.0431055 |
| CH25H | 3366 | chr10 | 90954555 | 90962128 | 0.0431544 | chr10:0909 | 0.0431544 |
| LIMD2 | 3368 | chr17 | 59128060 | 59136208 | 0.0431561 | chr17:0591 | 0.0431561 |
| NR2F6 | 3374 | chr19 | 17214647 | 17221855 | 0.0431784 | chr19:0172 | 0.0431784 |
| PAK6 | 3378 | chr15 | 38314038 | 38321790 | 0.0431961 | chr15:0383 | 0.0431961 |
| COMMD5 | 3382 | chr8 | 146047282 | 146054699 | 0.043232 | chr8:14604 | 0.043232 |
| AGXT2 | 3385 | chr5 | 35082150 | 35087531 | 0.043246 | chr5:03508 | 0.043246 |
| HNRPL | 3387 | chr19 | 44019243 | 44035114 | 0.0432492 | chr19:0440 | 0.0432492 |
| WNT11 | 3396 | chr11 | 75592933 | 75600731 | 0.0433098 | chr11:0755 | 0.0433098 |
| C6orf157-D | 3408 | chr6 | 83832276 | 83833739 | 0.0433584 | chr6:08383 | 0.0433584 |
| DAB2 | 3414 | chr5 | 39458170 | 39466149 | 0.0433756 | chr5:03946 | 0.0433756 |
| CKB-C14or | 3419 | chr14 | 103059125 | 103065176 | 0.0433924 | chr14:1030 | 0.0433924 |
| CYB561 | 3425 | chr17 | 58866225 | 58882531 | 0.043423 | chr17:0588 | 0.043423 |
| SLC25A39 | 3430 | chr17 | 39755194 | 39762552 | 0.043441 | chr17:0397 | 0.043441 |
| C1QL4-FLJ | 3431 | chr12 | 48017571 | 48027244 | 0.0434419 | chr12:0480 | 0.0434419 |
| EGLN2 | 3433 | chr19 | 45994666 | 46000787 | 0.0434568 | chr19:0459 | 0.0434568 |
| ZNF767 | 3434 | chr7 | 148950114 | 148957985 | 0.0434623 | chr7:14895 | 0.0434623 |
| TNFRSF1B | 3436 | chr1 | 12144383 | 12151868 | 0.0434691 | chr1:01214 | 0.0434691 |
| C3orf58 | 3438 | chr3 | 145168201 | 145176294 | 0.0434695 | chr3:14517 | 0.0434695 |
| USH1G-OT | 3439 | chr17 | 70431027 | 70431940 | 0.0434732 | chr17:0704 | 0.0434732 |
| GTF3C1-KI | 3440 | chr16 | 27468921 | 27468965 | 0.043478 | chr16:0274 | 0.043478 |
| GHRL | 3448 | chr3 | 10304509 | 10311556 | 0.0435258 | chr3:01030 | 0.0435258 |

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|---|---|---|---|---|---|---|---|
| MARK3 | 3453 | chr14 | 102916136 | 102924539 | 0.0435467 | chr14:1029 | 0.0435467 |
| JUNB | 3454 | chr19 | 12757866 | 12766037 | 0.0435678 | chr19:0127 | 0.0435678 |
| AKT1 | 3465 | chr14 | 104327518 | 104338570 | 0.0436296 | chr14:1043 | 0.0436296 |
| DPF1 | 3470 | chr19 | 43404742 | 43412071 | 0.0436675 | chr19:0434 | 0.0436675 |
| AGRP | 3474 | chr16 | 66074083 | 66078405 | 0.0436834 | chr16:0660 | 0.0436834 |
| GRASP | 3479 | chr12 | 50682608 | 50689513 | 0.0436997 | chr12:0506 | 0.0436997 |
| FKBP2 | 3491 | chr11 | 63762999 | 63768355 | 0.043736 | chr11:0637 | 0.043736 |
| TRPM5 | 3493 | chr11 | 2382156 | 2406242 | 0.0437481 | chr11:0024 | 0.0437481 |
| ALOXE3 | 3495 | chr17 | 7959560 | 7965484 | 0.0437575 | chr17:0079 | 0.0437575 |
| ZNF660 | 3496 | chr3 | 44601074 | 44612628 | 0.0437713 | chr3:0446 | 0.0437713 |
| COQ6 | 3497 | chr14 | 73480884 | 73492035 | 0.0437813 | chr14:0734 | 0.0437813 |
| RFTN1 | 3503 | chr3 | 16528143 | 16535056 | 0.043808 | chr3:0165 | 0.043808 |
| SLC39A6-S | 3505 | chr18 | 31963271 | 31963838 | 0.0438216 | chr18:0319 | 0.0438216 |
| DLX3 | 3507 | chr17 | 45424980 | 45430937 | 0.0438239 | chr17:0454 | 0.0438239 |
| CRKL | 3510 | chr22 | 19598900 | 19604494 | 0.0438496 | chr22:0196 | 0.0438496 |
| RPS6KA3 | 3522 | chrX | 20192180 | 20200157 | 0.0439003 | chrX:0201 | 0.0439003 |
| WISP3 | 3526 | chr6 | 112476517 | 112489917 | 0.0439286 | chr6:1124 | 0.0439286 |
| DNM1L | 3539 | chr12 | 32718127 | 32725963 | 0.0439964 | chr12:0327 | 0.0439964 |
| ARAF | 3545 | chrX | 47300225 | 47307788 | 0.0440328 | chrX:0473 | 0.0440328 |
| LRFN2 | 3551 | chr6 | 40660648 | 40668461 | 0.0440701 | chr6:0406 | 0.0440701 |
| DMAP1 | 3553 | chr1 | 44447453 | 44454246 | 0.0440792 | chr1:0444 | 0.0440792 |
| ACP5 | 3555 | chr19 | 11546783 | 11554170 | 0.0440882 | chr19:0115 | 0.0440882 |
| GPR175-M | 3557 | chr3 | 128790646 | 128791946 | 0.0441049 | chr3:1287 | 0.0441049 |
| RBP7 | 3573 | chr1 | 9979010 | 9982412 | 0.0441596 | chr1:0099 | 0.0441596 |
| PIN1 | 3580 | chr19 | 9801981 | 9808544 | 0.0442371 | chr19:0098 | 0.0442371 |
| SFMBT1 | 3581 | chr3 | 52978238 | 53060508 | 0.0442395 | chr3:0530 | 0.0442395 |
| TSC22D3 | 3582 | chrX | 106843797 | 106908556 | 0.0442423 | chrX:1068 | 0.0442423 |
| TBC1D14 | 3586 | chr4 | 6957888 | 6964554 | 0.0442624 | chr4:0069 | 0.0442624 |
| SPTBN5 | 3589 | chr15 | 39971213 | 39978844 | 0.0442957 | chr15:0399 | 0.0442957 |
| SELPLG | 3609 | chr12 | 107549636 | 107557203 | 0.0443839 | chr12:1075 | 0.0443839 |
| SLC10A7 | 3619 | chr4 | 147660027 | 147664278 | 0.0444135 | chr4:1476 | 0.0444135 |
| SLC24A2 | 3626 | chr9 | 19774509 | 19782347 | 0.0444399 | chr9:0197 | 0.0444399 |
| MAP4K1-EI | 3630 | chr19 | 43800504 | 43801521 | 0.0444539 | chr19:0438 | 0.0444539 |
| RKHD3 | 3631 | chr15 | 80122685 | 80130937 | 0.0444629 | chr15:0801 | 0.0444629 |
| PPAPDC3 | 3633 | chr9 | 133151921 | 133157573 | 0.044472 | chr9:1331 | 0.044472 |
| DPEP1 | 3643 | chr16 | 88209039 | 88226591 | 0.0445099 | chr16:0882 | 0.0445099 |
| PEX12-AP2 | 3651 | chr17 | 30929765 | 30938349 | 0.0445393 | chr17:0309 | 0.0445393 |
| RHOD | 3652 | chr11 | 66575946 | 66583228 | 0.0445455 | chr11:0665 | 0.0445455 |
| WNK2 | 3660 | chr9 | 94981649 | 94989522 | 0.0445957 | chr9:0949 | 0.0445957 |
| PTGIR | 3666 | chr19 | 51816872 | 51828988 | 0.0446497 | chr19:0518 | 0.0446497 |
| HRH3-FLJ4 | 3686 | chr20 | 60230688 | 60234104 | 0.0447402 | chr20:0602 | 0.0447402 |
| TSGA2-SLC | 3689 | chr21 | 42789542 | 42792820 | 0.0447555 | chr21:0427 | 0.0447555 |
| PRRG3 | 3692 | chrX | 150612544 | 150620458 | 0.0447681 | chrX:1506 | 0.0447681 |
| CHKA | 3699 | chr11 | 67642732 | 67650545 | 0.044798 | chr11:0676 | 0.044798 |
| CRYL1 | 3705 | chr13 | 19995606 | 20002599 | 0.0448123 | chr13:0199 | 0.0448123 |
| ZNF238 | 3707 | chr1 | 242275947 | 242286211 | 0.0448158 | chr1:2422 | 0.0448158 |
| NT5M | 3716 | chr17 | 17146985 | 17149812 | 0.0448495 | chr17:0171 | 0.0448495 |
| TMEM176B | 3737 | chr7 | 150129431 | 150133155 | 0.0449803 | chr7:1501 | 0.0449803 |
| CRSP2 | 3738 | chrX | 40392486 | 40484955 | 0.0449824 | chrX:0404 | 0.0449824 |
| MYOCD | 3739 | chr17 | 12505181 | 12512604 | 0.0449985 | chr17:0125 | 0.0449985 |
| CST9 | 3740 | chr20 | 23532139 | 23540008 | 0.045006 | chr20:0235 | 0.045006 |
| C19orf6-CN | 3741 | chr19 | 972187 | 977218 | 0.0450267 | chr19:0009 | 0.0450267 |
| CHAC1 | 3743 | chr15 | 39027480 | 39035580 | 0.0450347 | chr15:0390 | 0.0450347 |
| PGLYRP4-S | 3747 | chr1 | 151587911 | 151596889 | 0.0450547 | chr1:1515 | 0.0450547 |
| GRAMD2 | 3748 | chr15 | 70274854 | 70278393 | 0.0450651 | chr15:0702 | 0.0450651 |
| C18orf1 | 3750 | chr18 | 13203309 | 13604301 | 0.0450722 | chr18:0132 | 0.0450722 |
| GHDC | 3759 | chr17 | 37595113 | 37604671 | 0.0451503 | chr17:0375 | 0.0451503 |
| GNAO1 | 3763 | chr16 | 54778343 | 54786233 | 0.0451777 | chr16:0547 | 0.0451777 |

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|---|---|---|---|---|---|---|---|
| REN | 3767 | chr1 | 202390640 | 202407557 | 0.0451916 | chr1:20240 | 0.0451916 |
| TSPAN2 | 3770 | chr1 | 115432050 | 115436909 | 0.0452028 | chr1:11543 | 0.0452028 |
| ATF5 | 3786 | chr19 | 55119132 | 55124525 | 0.045266 | chr19:0551 | 0.045266 |
| SIPA1L3 | 3800 | chr19 | 43084620 | 43092204 | 0.0453409 | chr19:0430 | 0.0453409 |
| POU3F2 | 3806 | chr6 | 99383980 | 99391979 | 0.0453685 | chr6:09938 | 0.0453685 |
| RTTN | 3809 | chr18 | 66021937 | 66029111 | 0.0453835 | chr18:0660 | 0.0453835 |
| KRT13 | 3810 | chr17 | 36912823 | 36920741 | 0.0453926 | chr17:0369 | 0.0453926 |
| LSM14B | 3812 | chr20 | 60125402 | 60143837 | 0.0453935 | chr20:0601 | 0.0453935 |
| GPRC5C | 3815 | chr17 | 69933195 | 69942255 | 0.0454182 | chr17:0699 | 0.0454182 |
| CHI3L2 | 3829 | chr1 | 111566589 | 111574323 | 0.0454962 | chr1:11157 | 0.0454962 |
| LETM1 | 3835 | chr4 | 1825378 | 1832924 | 0.0455064 | chr4:00182 | 0.0455064 |
| SNTB2 | 3838 | chr16 | 67773225 | 67900321 | 0.0455504 | chr16:0677 | 0.0455504 |
| LMO6 | 3845 | chrX | 48927198 | 48931201 | 0.045593 | chrX:04893 | 0.045593 |
| HSPB7-CL( | 3846 | chr1 | 16217591 | 16221006 | 0.0455951 | chr1:01621 | 0.0455951 |
| FGD6 | 3850 | chr12 | 94130525 | 94140827 | 0.0456199 | chr12:0941 | 0.0456199 |
| SAPS1 | 3853 | chr19 | 60432934 | 60465179 | 0.045639 | chr19:0604 | 0.045639 |
| YAP1 | 3854 | chr11 | 101481386 | 101489227 | 0.0456473 | chr11:1014 | 0.0456473 |
| FGF3 | 3862 | chr11 | 69340322 | 69348227 | 0.0456818 | chr11:0693 | 0.0456818 |
| PDGFB | 3871 | chr22 | 37967445 | 37976407 | 0.0457127 | chr22:0379 | 0.0457127 |
| RALGDS | 3878 | chr9 | 134983881 | 134991495 | 0.0457561 | chr9:13498 | 0.0457561 |
| RPL28 | 3883 | chr19 | 60581402 | 60592050 | 0.0457783 | chr19:0605 | 0.0457783 |
| PKP3 | 3884 | chr11 | 381108 | 386758 | 0.0457788 | chr11:0003 | 0.0457788 |
| BTK-RPL36 | 3898 | chrX | 100527871 | 100532616 | 0.0458634 | chrX:10053 | 0.0458634 |
| EML2 | 3899 | chr19 | 50832025 | 50839878 | 0.0458689 | chr19:0508 | 0.0458689 |
| SIRT2-NFK | 3902 | chr19 | 44082298 | 44082468 | 0.045879 | chr19:0440 | 0.045879 |
| hsa-mir-9-3 | 3907 | chr15 | 87706785 | 87714662 | 0.0458953 | chr15:0877 | 0.0458953 |
| U70 | 3908 | chrX | 153279981 | 153281747 | 0.0458985 | chrX:15327 | 0.0458985 |
| CBX4 | 3909 | chr17 | 75425232 | 75433283 | 0.0459034 | chr17:0754 | 0.0459034 |
| ARHGEF16 | 3911 | chr1 | 3364598 | 3372492 | 0.045933 | chr1:00336 | 0.045933 |
| SULT2B1 | 3916 | chr19 | 53741968 | 53771422 | 0.0459692 | chr19:0537 | 0.0459692 |
| FUT8 | 3920 | chr14 | 64941876 | 65208336 | 0.0460051 | chr14:0649 | 0.0460051 |
| ARFGAP3 | 3926 | chr22 | 41580627 | 41588365 | 0.0460299 | chr22:0415 | 0.0460299 |
| ESRRA | 3929 | chr11 | 63824320 | 63839774 | 0.0460342 | chr11:0638 | 0.0460342 |
| ICAM1 | 3933 | chr19 | 10238467 | 10257948 | 0.0460416 | chr19:0102 | 0.0460416 |
| PTBP1 | 3938 | chr19 | 742949 | 750907 | 0.0460549 | chr19:0007 | 0.0460549 |
| CALCR | 3943 | chr7 | 92948803 | 93047461 | 0.0460806 | chr7:09304 | 0.0460806 |
| MGC34824 | 3947 | chr2 | 38206402 | 38212991 | 0.0461003 | chr2:03821 | 0.0461003 |
| DNAH1 | 3950 | chr3 | 52320245 | 52327942 | 0.0461231 | chr3:05232 | 0.0461231 |
| EPS8L3 | 3954 | chr1 | 110105667 | 110112673 | 0.0461423 | chr1:11011 | 0.0461423 |
| PGD | 3979 | chr1 | 10381373 | 10384239 | 0.0463149 | chr1:01038 | 0.0463149 |
| MYH10 | 3982 | chr17 | 8472271 | 8477796 | 0.0463341 | chr17:0084 | 0.0463341 |
| ATP6V0A4 | 3991 | chr7 | 138107343 | 138138701 | 0.0463891 | chr7:13810 | 0.0463891 |
| SQSTM1 | 3992 | chr5 | 179176526 | 179182731 | 0.0464025 | chr5:17917 | 0.0464025 |
| hsa-mir-124 | 4021 | chr20 | 61274803 | 61282675 | 0.046545 | chr20:0612 | 0.046545 |
| MAPKBP1 | 4035 | chr15 | 39849635 | 39907348 | 0.0466226 | chr15:0398 | 0.0466226 |
| HSPA12B | 4045 | chr20 | 3655893 | 3663776 | 0.0466554 | chr20:0036 | 0.0466554 |
| GPR146 | 4047 | chr7 | 1058224 | 1065566 | 0.046657 | chr7:00106 | 0.046657 |
| LAPTM4A | 4058 | chr2 | 20112322 | 20118134 | 0.0467289 | chr2:02011 | 0.0467289 |
| BOLA1 | 4060 | chr1 | 148137222 | 148140097 | 0.0467479 | chr1:14813 | 0.0467479 |
| HOXD9 | 4082 | chr2 | 176692975 | 176697785 | 0.0468106 | chr2:17669 | 0.0468106 |
| RHOF | 4083 | chr12 | 120713884 | 120724688 | 0.0468337 | chr12:1207 | 0.0468337 |
| PLA2R1 | 4085 | chr2 | 160625193 | 160630413 | 0.0468382 | chr2:16062 | 0.0468382 |
| LCN6 | 4094 | chr9 | 138760385 | 138768293 | 0.0468638 | chr9:13876 | 0.0468638 |
| HPCA | 4102 | chr1 | 33119236 | 33127161 | 0.0468946 | chr1:03312 | 0.0468946 |
| FBXO43-PC | 4106 | chr8 | 101227479 | 101231924 | 0.04692 | chr8:10123 | 0.04692 |
| TGM2 | 4119 | chr20 | 36224791 | 36232417 | 0.0469957 | chr20:0362 | 0.0469957 |
| NSUN5 | 4121 | chr7 | 72359590 | 72363832 | 0.0470046 | chr7:07236 | 0.0470046 |
| RTN4RL2 | 4122 | chr11 | 56979650 | 56987082 | 0.0470217 | chr11:0569 | 0.0470217 |

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|---|---|---|---|---|---|---|---|
| P2RX1 | 4123 | chr17 | 3746649 | 3771953 | 0.0470255 | chr17:00376 | 0.0470255 |
| NUDT14 | 4132 | chr14 | 104710370 | 104723494 | 0.0470604 | chr14:1047 | 0.0470604 |
| SLC12A5 | 4151 | chr20 | 44086053 | 44093819 | 0.0471261 | chr20:0440 | 0.0471261 |
| ANGPTL4 | 4154 | chr19 | 8332738 | 8337640 | 0.0471359 | chr19:0083 | 0.0471359 |
| SLITRK5 | 4155 | chr13 | 87117578 | 87125491 | 0.0471438 | chr13:0871 | 0.0471438 |
| CIDEB | 4157 | chr14 | 23850426 | 23850803 | 0.0471537 | chr14:0238 | 0.0471537 |
| GAPDH | 4161 | chr12 | 6511538 | 6516539 | 0.0471641 | chr12:0065 | 0.0471641 |
| UQCR | 4172 | chr19 | 1548880 | 1560188 | 0.0472634 | chr19:0015 | 0.0472634 |
| C12orf30 | 4173 | chr12 | 111028526 | 111035273 | 0.0472652 | chr12:11103 | 0.0472652 |
| ELAC2 | 4186 | chr17 | 12859854 | 12867332 | 0.0473174 | chr17:0128 | 0.0473174 |
| ABCB9 | 4203 | chr12 | 122008911 | 122030244 | 0.0474293 | chr12:1220 | 0.0474293 |
| hsa-mir-499 | 4207 | chr20 | 33036559 | 33041923 | 0.0474613 | chr20:0330 | 0.0474613 |
| FLJ43582 | 4220 | chr8 | 38503520 | 38509438 | 0.0475207 | chr8:0385 | 0.0475207 |
| TOP2A | 4223 | chr17 | 35825173 | 35833169 | 0.0475375 | chr17:0358 | 0.0475375 |
| RING1 | 4224 | chr6 | 33283785 | 33286046 | 0.0475425 | chr6:0332 | 0.0475425 |
| PRIMA1 | 4226 | chr14 | 93321411 | 93329630 | 0.0475504 | chr14:0933 | 0.0475504 |
| HEL308-MF | 4229 | chr4 | 84596084 | 84596130 | 0.0475603 | chr4:0845 | 0.0475603 |
| SPATC1 | 4230 | chr8 | 145153208 | 145160901 | 0.0475615 | chr8:1451 | 0.0475615 |
| GLB1L3 | 4246 | chr11 | 133645977 | 133653360 | 0.0476331 | chr11:1336 | 0.0476331 |
| BAIAP2 | 4253 | chr17 | 76618977 | 76626142 | 0.0476778 | chr17:0766 | 0.0476778 |
| VPS35-OR( | 4258 | chr16 | 45280585 | 45280979 | 0.047697 | chr16:0452 | 0.047697 |
| SLC6A4 | 4262 | chr17 | 25570863 | 25591465 | 0.0477143 | chr17:0255 | 0.0477143 |
| SPIN3 | 4272 | chrX | 57035523 | 57039598 | 0.0477694 | chrX:0570 | 0.0477694 |
| WDR40B | 4273 | chrX | 125512061 | 125518741 | 0.0477847 | chrX:1255 | 0.0477847 |
| C14orf48 | 4284 | chr14 | 93528466 | 93536677 | 0.0478551 | chr14:0935 | 0.0478551 |
| UBE1 | 4299 | chrX | 46931164 | 46959474 | 0.0479376 | chrX:0469 | 0.0479376 |
| ITGA5 | 4300 | chr12 | 53075200 | 53104839 | 0.047938 | chr12:0530 | 0.047938 |
| hsa-mir-564 | 4317 | chr3 | 44876607 | 44878363 | 0.0479868 | chr3:0448 | 0.0479868 |
| C10orf119 | 4318 | chr10 | 121619973 | 121625882 | 0.0479958 | chr10:1216 | 0.0479958 |
| RBM14 | 4321 | chr11 | 66136665 | 66152575 | 0.0480222 | chr11:0661 | 0.0480222 |
| CACNA1G | 4327 | chr17 | 45988374 | 45996245 | 0.0480655 | chr17:0459 | 0.0480655 |
| MSRA | 4328 | chr8 | 9943723 | 9951939 | 0.0480752 | chr8:0099 | 0.0480752 |
| DIAPH2 | 4335 | chrX | 95820914 | 96028063 | 0.0481244 | chrX:0958 | 0.0481244 |
| RCOR2 | 4343 | chr11 | 63438018 | 63445934 | 0.048159 | chr11:0634 | 0.048159 |
| NOM1 | 4363 | chr7 | 156429740 | 156438148 | 0.0482607 | chr7:1564 | 0.0482607 |
| GATA6 | 4364 | chr18 | 17998108 | 18005706 | 0.0482609 | chr18:0179 | 0.0482609 |
| C9orf140-U | 4367 | chr9 | 139084904 | 139092423 | 0.0482659 | chr9:1390 | 0.0482659 |
| TMEM92 | 4390 | chr17 | 45701458 | 45708958 | 0.0484136 | chr17:0457 | 0.0484136 |
| TROAP | 4393 | chr12 | 48000074 | 48006138 | 0.0484335 | chr12:0480 | 0.0484335 |
| OPRS1-GA | 4394 | chr9 | 34627856 | 34636612 | 0.0484348 | chr9:0346 | 0.0484348 |
| TGDS-GPR | 4396 | chr13 | 94046589 | 94052048 | 0.0484492 | chr13:0940 | 0.0484492 |
| HPSE2 | 4415 | chr10 | 100983131 | 100990767 | 0.0485555 | chr10:1009 | 0.0485555 |
| hsa-mir-223 | 4418 | chrX | 65150058 | 65156935 | 0.0485766 | chrX:0651 | 0.0485766 |
| TAGLN | 4432 | chr11 | 116573490 | 116580563 | 0.0486722 | chr11:1165 | 0.0486722 |
| NLGN4Y | 4454 | chrY | 15139658 | 15245982 | 0.0487578 | chrY:0151 | 0.0487578 |
| IRS1 | 4455 | chr2 | 227369378 | 227378071 | 0.048762 | chr2:2273 | 0.048762 |
| ZNF31 | 4458 | chr1 | 33705422 | 33713083 | 0.0487711 | chr1:0337 | 0.0487711 |
| TENC1 | 4469 | chr12 | 51722522 | 51732730 | 0.0488437 | chr12:0517 | 0.0488437 |
| TCEB2 | 4478 | chr16 | 2764681 | 2772744 | 0.0488795 | chr16:0027 | 0.0488795 |
| TMEM101 | 4487 | chr17 | 39445503 | 39451853 | 0.0489115 | chr17:0394 | 0.0489115 |
| TMEM145 | 4507 | chr19 | 47507154 | 47511412 | 0.0490187 | chr19:0475 | 0.0490187 |
| SASS6-CCI | 4511 | chr1 | 100371152 | 100371196 | 0.0490431 | chr1:1003 | 0.0490431 |
| CHRNA4 | 4516 | chr20 | 61460636 | 61468532 | 0.0490931 | chr20:0614 | 0.0490931 |
| KIF13A | 4523 | chr6 | 18093262 | 18101281 | 0.0491239 | chr6:0180 | 0.0491239 |
| TMEM80 | 4525 | chr11 | 680891 | 685651 | 0.0491308 | chr11:0006 | 0.0491308 |
| GALR3 | 4532 | chr22 | 36543824 | 36551777 | 0.0491612 | chr22:0365 | 0.0491612 |
| CALML4 | 4535 | chr15 | 66283233 | 66286188 | 0.0491661 | chr15:0662 | 0.0491661 |
| RPP25 | 4537 | chr15 | 73033565 | 73042242 | 0.0491739 | chr15:0730 | 0.0491739 |

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|---|---|---|---|---|---|---|---|
| METTL5 | 4551 | chr2 | 170387190 | 170395001 | 0.0492581 | chr2:170393 | 0.0492581 |
| TXNL6-SLC | 4553 | chr19 | 17432721 | 17442153 | 0.0492714 | chr19:01744 | 0.0492714 |
| SLC40A1 | 4573 | chr2 | 190151235 | 190159320 | 0.0493603 | chr2:190154 | 0.0493603 |
| BCAS3 | 4576 | chr17 | 56106352 | 56112782 | 0.0493674 | chr17:0561( | 0.0493674 |
| PCTK1 | 4586 | chrX | 46959699 | 46974351 | 0.0494453 | chrX:04695 | 0.0494453 |
| MYH6 | 4607 | chr14 | 22925331 | 22951579 | 0.0495639 | chr14:0229 | 0.0495639 |
| INHA | 4612 | chr2 | 220139830 | 220147683 | 0.049581 | chr2:22014( | 0.049581 |
| KIAA0152 | 4614 | chr12 | 119607113 | 119611967 | 0.0495944 | chr12:1196( | 0.0495944 |
| RHPN2 | 4615 | chr19 | 38245558 | 38253045 | 0.0496001 | chr19:0382 | 0.0496001 |
| BAT5-C6orf | 4632 | chr6 | 31779162 | 31782519 | 0.0496723 | chr6:03177 | 0.0496723 |
| BCL11B | 4646 | chr14 | 98805000 | 98813103 | 0.0497475 | chr14:0988( | 0.0497475 |
| ARPC2 | 4666 | chr2 | 218784694 | 218792935 | 0.0498569 | chr2:21878 | 0.0498569 |
| TP53BP1-M | 4670 | chr15 | 41590118 | 41597007 | 0.0498733 | chr15:0415 | 0.0498733 |
| RSL1D1 | 4673 | chr16 | 11850948 | 11856356 | 0.0498828 | chr16:0118 | 0.0498828 |
| KIAA0404-F | 4675 | chr11 | 64441417 | 64448498 | 0.0499187 | chr11:0644 | 0.0499187 |

**HPSE- bound genes (promoter region)** **ST subset (356 genes)**

| Gene | Rank (Hep- | Chromosom | Start | End | Min P(Xbar) | Probe | P(Xbar) |
|---|---|---|---|---|---|---|---|
| FNBP1-GPI | 109 | chr9 | 131845863 | 131854520 | 0.0191227 | chr9:13184 | 0.0191227 |
| GLUL | 197 | chr1 | 180624667 | 180633067 | 0.0213239 | chr1:18062 | 0.0213239 |
| CYHR1-KIF | 241 | chr8 | 145661654 | 145662485 | 0.0220756 | chr8:14566 | 0.0220756 |
| PGRMC2 | 308 | chr4 | 129426034 | 129433694 | 0.0231493 | chr4:12942 | 0.0231493 |
| KBTBD2 | 312 | chr7 | 32895762 | 32902507 | 0.023223 | chr7:03289 | 0.023223 |
| ASPH | 329 | chr8 | 62762332 | 62795141 | 0.0233948 | chr8:06278 | 0.0233948 |
| KIF9-KLHL | 338 | chr3 | 47299132 | 47299398 | 0.0234838 | chr3:04729 | 0.0234838 |
| C1orf183 | 344 | chr1 | 112080926 | 112101764 | 0.0235434 | chr1:11209 | 0.0235434 |
| FEZF1 | 348 | chr7 | 121729259 | 121737236 | 0.0236055 | chr7:12173 | 0.0236055 |
| HNRPD | 356 | chr4 | 83511336 | 83518809 | 0.0236787 | chr4:08351 | 0.0236787 |
| UBE2F | 364 | chr2 | 238535557 | 238542899 | 0.0237765 | chr2:23854( | 0.0237765 |
| FILIP1L | 387 | chr3 | 101075292 | 101321439 | 0.0239308 | chr3:10107 | 0.0239308 |
| MAK10 | 399 | chr9 | 87740438 | 87748406 | 0.0241083 | chr9:08774 | 0.0241083 |
| ZHX2 | 460 | chr8 | 123859030 | 123865678 | 0.024864 | chr8:12386 | 0.024864 |
| CPOX | 521 | chr3 | 99792739 | 99800280 | 0.0256007 | chr3:09979 | 0.0256007 |
| MKLN1 | 536 | chr7 | 130658385 | 130665682 | 0.0258055 | chr7:13066 | 0.0258055 |
| ZNF416-ZIK | 598 | chr19 | 62782096 | 62787359 | 0.0263676 | chr19:0627 | 0.0263676 |
| SEPHS1 | 646 | chr10 | 13425254 | 13434653 | 0.0267822 | chr10:0134 | 0.0267822 |
| PON3 | 672 | chr7 | 94861651 | 94869092 | 0.0270484 | chr7:09486 | 0.0270484 |
| MYO10 | 813 | chr5 | 16986726 | 16993675 | 0.0282564 | chr5:01698 | 0.0282564 |
| SLC22A3 | 858 | chr6 | 160684032 | 160691861 | 0.0286356 | chr6:16068 | 0.0286356 |
| KHK | 874 | chr2 | 27162843 | 27166105 | 0.0287529 | chr2:02716 | 0.0287529 |
| PMAIP1 | 895 | chr18 | 55713261 | 55720851 | 0.0289534 | chr18:0557 | 0.0289534 |
| F2R | 941 | chr5 | 76042224 | 76050349 | 0.0292161 | chr5:07604 | 0.0292161 |
| CORO2A | 942 | chr9 | 99926639 | 100000239 | 0.0292364 | chr9:09999 | 0.0292364 |
| RBPMS | 956 | chr8 | 30357082 | 30364620 | 0.0294003 | chr8:03036( | 0.0294003 |
| HRBL | 969 | chr7 | 99969905 | 99977403 | 0.0295725 | chr7:09997 | 0.0295725 |
| KIAA2013-F | 994 | chr1 | 11909267 | 11917265 | 0.0297299 | chr1:01191 | 0.0297299 |
| PENK | 1007 | chr8 | 57518842 | 57526225 | 0.0297939 | chr8:05752 | 0.0297939 |
| SSBP3 | 1010 | chr1 | 54641972 | 54649389 | 0.0298147 | chr1:05464 | 0.0298147 |
| OR2S2 | 1020 | chr9 | 35946590 | 35953569 | 0.0299129 | chr9:03595 | 0.0299129 |
| DOCK7 | 1031 | chr1 | 62924285 | 62931994 | 0.030059 | chr1:06292 | 0.030059 |
| RAPH1 | 1070 | chr2 | 204105829 | 204113584 | 0.0302973 | chr2:20410 | 0.0302973 |
| SFXN5 | 1073 | chr2 | 73150224 | 73153963 | 0.0303174 | chr2:07315 | 0.0303174 |
| PSMD5 | 1089 | chr9 | 122643219 | 122650556 | 0.0304442 | chr9:12264 | 0.0304442 |
| ELMOD2 | 1111 | chr4 | 141662713 | 141667324 | 0.0306049 | chr4:14166 | 0.0306049 |
| CYP2U1 | 1174 | chr4 | 109066902 | 109074062 | 0.031064 | chr4:10907 | 0.031064 |
| EVC2-EVC | 1176 | chr4 | 5761367 | 5763471 | 0.0310654 | chr4:00576 | 0.0310654 |
| TIGD2 | 1185 | chr4 | 90249763 | 90255555 | 0.0310978 | chr4:09025 | 0.0310978 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| H2AFV | 1195 | chr7 | 44851569 | 44857779 | 0.0311547 | chr7:04485 | 0.0311547 |
| LOC13094( | 1202 | chr2 | 159021493 | 159021537 | 0.0312012 | chr2:15902 | 0.0312012 |
| USP1 | 1203 | chr1 | 62669713 | 62677304 | 0.0312046 | chr1:06267 | 0.0312046 |
| CEP72 | 1281 | chr5 | 660124 | 665837 | 0.0316632 | chr5:00066 | 0.0316632 |
| UGP2 | 1285 | chr2 | 63916398 | 63924975 | 0.031692 | chr2:06392 | 0.031692 |
| DLC1 | 1296 | chr8 | 13032495 | 13421534 | 0.0317728 | chr8:01303 | 0.0317728 |
| SPBC24 | 1309 | chr19 | 11127288 | 11132317 | 0.0318823 | chr19:01112 | 0.0318823 |
| HNRPK | 1329 | chr9 | 85772213 | 85785246 | 0.0320447 | chr9:08578 | 0.0320447 |
| IFNAR1 | 1351 | chr21 | 33615171 | 33621381 | 0.0321401 | chr21:0336 | 0.0321401 |
| LOC339745 | 1386 | chr2 | 138970363 | 138978192 | 0.032416 | chr2:13897 | 0.032416 |
| SAMD4A | 1389 | chr14 | 54098695 | 54106866 | 0.0324389 | chr14:0541( | 0.0324389 |
| KIAA1212 | 1411 | chr2 | 55497808 | 55505972 | 0.0325526 | chr2:05550( | 0.0325526 |
| MORN1-RE | 1415 | chr1 | 2312846 | 2313080 | 0.0325704 | chr1:00231 | 0.0325704 |
| KIAA0922 | 1424 | chr4 | 154602810 | 154609040 | 0.0326404 | chr4:15460 | 0.0326404 |
| RABIF | 1448 | chr1 | 201123895 | 201130359 | 0.0328411 | chr1:20112 | 0.0328411 |
| RNF32 | 1452 | chr7 | 156120701 | 156130368 | 0.0328534 | chr7:15612 | 0.0328534 |
| FLJ20701 | 1473 | chr2 | 229833684 | 229849674 | 0.0330419 | chr2:22984 | 0.0330419 |
| CHD1 | 1484 | chr5 | 98288002 | 98295341 | 0.03312 | chr5:09829 | 0.03312 |
| ST8SIA1 | 1486 | chr12 | 22375986 | 22383383 | 0.0331362 | chr12:02237 | 0.0331362 |
| ITGA1 | 1487 | chr5 | 52119548 | 52134495 | 0.0331376 | chr5:05211 | 0.0331376 |
| CCNG2 | 1509 | chr4 | 78292338 | 78299985 | 0.0333192 | chr4:07829 | 0.0333192 |
| LENG8 | 1522 | chr19 | 59649932 | 59664683 | 0.0334319 | chr19:0596 | 0.0334319 |
| PRDM5 | 1548 | chr4 | 122060791 | 122066615 | 0.0335887 | chr4:12206 | 0.0335887 |
| SKP1A | 1557 | chr5 | 133538137 | 133544836 | 0.0336431 | chr5:13354 | 0.0336431 |
| TFE3 | 1574 | chrX | 48785314 | 48792287 | 0.0337614 | chrX:04878 | 0.0337614 |
| KCNH3 | 1587 | chr12 | 48214223 | 48221947 | 0.033842 | chr12:0482 | 0.033842 |
| EPB41L4A | 1597 | chr5 | 111525852 | 111788379 | 0.033915 | chr5:111782 | 0.033915 |
| NCBP1 | 1599 | chr9 | 99426771 | 99435488 | 0.0339242 | chr9:09943 | 0.0339242 |
| THPO-CHR | 1615 | chr3 | 185578683 | 185580430 | 0.0340124 | chr3:18557 | 0.0340124 |
| WHSC1L1-I | 1624 | chr8 | 38359032 | 38363028 | 0.0340313 | chr8:03836 | 0.0340313 |
| EMILIN3 | 1646 | chr20 | 39426229 | 39433775 | 0.0341955 | chr20:0394 | 0.0341955 |
| JAK2 | 1647 | chr9 | 4969761 | 5012956 | 0.0341986 | chr9:00497 | 0.0341986 |
| C18orf10 | 1668 | chr18 | 32663066 | 32668496 | 0.034281 | chr18:0326 | 0.034281 |
| CYR61 | 1685 | chr1 | 85813751 | 85821729 | 0.0343656 | chr1:08581 | 0.0343656 |
| PYY-NAGS | 1696 | chr17 | 39437516 | 39437560 | 0.0344236 | chr17:0394 | 0.0344236 |
| GEM | 1713 | chr8 | 95341363 | 95348607 | 0.0345383 | chr8:09534 | 0.0345383 |
| YIPF6 | 1734 | chrX | 67630921 | 67637933 | 0.0346453 | chrX:06763 | 0.0346453 |
| SLC1A4 | 1736 | chr2 | 65065358 | 65072797 | 0.0346482 | chr2:06506 | 0.0346482 |
| FABP3 | 1756 | chr1 | 31616130 | 31623972 | 0.0347796 | chr1:03161 | 0.0347796 |
| CBLB | 1758 | chr3 | 107066799 | 107076045 | 0.0347966 | chr3:10707( | 0.0347966 |
| KCTD9-CD( | 1784 | chr8 | 25371927 | 25372430 | 0.0349729 | chr8:02537 | 0.0349729 |
| POU2F1 | 1793 | chr1 | 165451317 | 165567586 | 0.0350187 | chr1:16545 | 0.0350187 |
| FLJ32447 | 1818 | chr2 | 222866565 | 222871029 | 0.0351663 | chr2:22286 | 0.0351663 |
| CHN2 | 1824 | chr7 | 29195644 | 29203305 | 0.0351754 | chr7:02919 | 0.0351754 |
| hsa-mir-210 | 1848 | chr11 | 558208 | 566427 | 0.0352907 | chr11:0005 | 0.0352907 |
| TEX10 | 1852 | chr9 | 102152691 | 102159422 | 0.0353116 | chr9:10215 | 0.0353116 |
| UPF2 | 1867 | chr10 | 12115947 | 12129097 | 0.035394 | chr10:0121 | 0.035394 |
| LRRFIP1 | 1870 | chr2 | 238260084 | 238345204 | 0.0354279 | chr2:23826 | 0.0354279 |
| B4GALT6 | 1878 | chr18 | 27516375 | 27524047 | 0.0354635 | chr18:0275 | 0.0354635 |
| C2orf19 | 1885 | chr2 | 238727093 | 238734860 | 0.0355245 | chr2:23873 | 0.0355245 |
| INSRR-NTF | 1904 | chr1 | 155095320 | 155097278 | 0.0355966 | chr1:15509 | 0.0355966 |
| RFK | 1923 | chr9 | 78197062 | 78204436 | 0.035699 | chr9:07819 | 0.035699 |
| EBNA1BP2 | 1985 | chr1 | 43410528 | 43410573 | 0.0361128 | chr1:04341( | 0.0361128 |
| DPH3-OXN | 1989 | chr3 | 16281496 | 16281680 | 0.0361387 | chr3:01628 | 0.0361387 |
| ZNF57 | 1996 | chr19 | 2846831 | 2854218 | 0.0361689 | chr19:0028 | 0.0361689 |
| ASAH1 | 1997 | chr8 | 17983510 | 17991614 | 0.0361776 | chr8:01798 | 0.0361776 |
| VCPIP1-C8 | 2004 | chr8 | 67741987 | 67751019 | 0.0362465 | chr8:06774 | 0.0362465 |
| hsa-mir-219 | 2007 | chr6 | 33282714 | 33283663 | 0.0362595 | chr6:03328 | 0.0362595 |

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|---|---|---|---|---|---|---|---|
| FGF2 | 2008 | chr4 | 123962465 | 123969701 | 0.0362604 | chr4:123966 | 0.0362604 |
| H2AFZ | 2024 | chr4 | 101088848 | 101095713 | 0.0363552 | chr4:101090 | 0.0363552 |
| SLC5A6 | 2025 | chr2 | 27288566 | 27293494 | 0.0363565 | chr2:027288 | 0.0363565 |
| C2orf28 | 2035 | chr2 | 27281598 | 27288261 | 0.0364056 | chr2:027287 | 0.0364056 |
| YY1 | 2039 | chr14 | 99769669 | 99777724 | 0.0364171 | chr14:09977 | 0.0364171 |
| IFRD2 | 2048 | chr3 | 50302594 | 50305134 | 0.0364766 | chr3:050304 | 0.0364766 |
| CENPT-THA | 2057 | chr16 | 66425369 | 66433621 | 0.0365313 | chr16:06643 | 0.0365313 |
| SERINC5 | 2059 | chr5 | 79585984 | 79592954 | 0.0365357 | chr5:079587 | 0.0365357 |
| PEX6-PPP2 | 2062 | chr6 | 43054864 | 43060205 | 0.036549 | chr6:043054 | 0.036549 |
| CUTL1 | 2075 | chr7 | 101240714 | 101250050 | 0.0366217 | chr7:101244 | 0.0366217 |
| CNKSR2 | 2084 | chrX | 21297091 | 21305376 | 0.036682 | chrX:021302 | 0.036682 |
| PCNA-CDS | 2087 | chr20 | 5055272 | 5055449 | 0.0366875 | chr20:00505 | 0.0366875 |
| CPNE2 | 2088 | chr16 | 55678541 | 55686508 | 0.0366994 | chr16:05568 | 0.0366994 |
| MGC61571 | 2100 | chr3 | 28254879 | 28259500 | 0.0367587 | chr3:028258 | 0.0367587 |
| COG5 | 2104 | chr7 | 106991795 | 106994911 | 0.0367726 | chr7:106991 | 0.0367726 |
| FAM122B | 2105 | chrX | 133755375 | 133758812 | 0.0367813 | chrX:133758 | 0.0367813 |
| TNRC6B | 2107 | chr22 | 38765520 | 38773686 | 0.0367881 | chr22:03877 | 0.0367881 |
| SFRP4-EPI | 2109 | chr7 | 37922955 | 37926680 | 0.0368143 | chr7:037923 | 0.0368143 |
| ZNF689 | 2124 | chr16 | 30527745 | 30534369 | 0.0368651 | chr16:03052 | 0.0368651 |
| APBA1 | 2144 | chr9 | 71474673 | 71481896 | 0.0370064 | chr9:071477 | 0.0370064 |
| TGFBRAP1 | 2145 | chr2 | 105312604 | 105320292 | 0.0370169 | chr2:105313 | 0.0370169 |
| TEX264 | 2195 | chr3 | 51674894 | 51713230 | 0.0372534 | chr3:051680 | 0.0372534 |
| CA2 | 2214 | chr8 | 86559612 | 86565978 | 0.0373384 | chr8:086562 | 0.0373384 |
| GPR107 | 2215 | chr9 | 131855599 | 131858267 | 0.0373713 | chr9:131855 | 0.0373713 |
| MED12L | 2220 | chr3 | 152281521 | 152289788 | 0.0373917 | chr3:152285 | 0.0373917 |
| ZNHIT1 | 2222 | chr7 | 100642349 | 100647706 | 0.0373946 | chr7:100643 | 0.0373946 |
| DPYSL4 | 2231 | chr10 | 133848432 | 133853020 | 0.037434 | chr10:13384 | 0.037434 |
| MARCKSL1 | 2238 | chr1 | 32571907 | 32579916 | 0.0374691 | chr1:032574 | 0.0374691 |
| HMGB3 | 2243 | chrX | 149896974 | 149905034 | 0.0374871 | chrX:149902 | 0.0374871 |
| ZFP161 | 2249 | chr18 | 5280856 | 5288825 | 0.037512 | chr18:00528 | 0.037512 |
| PTPLB | 2253 | chr3 | 124784185 | 124790636 | 0.0375407 | chr3:124786 | 0.0375407 |
| STARD3 | 2290 | chr17 | 35046384 | 35073127 | 0.0377336 | chr17:03504 | 0.0377336 |
| CREB1 | 2300 | chr2 | 208097688 | 208104954 | 0.0377946 | chr2:208102 | 0.0377946 |
| KIN-ATP5C | 2312 | chr10 | 7870037 | 7870081 | 0.0378267 | chr10:00787 | 0.0378267 |
| TP53RK | 2314 | chr20 | 44751699 | 44756706 | 0.0378324 | chr20:04475 | 0.0378324 |
| MAP7 | 2319 | chr6 | 136910957 | 136918878 | 0.0378766 | chr6:136913 | 0.0378766 |
| DERA | 2326 | chr12 | 15950644 | 15957989 | 0.0379011 | chr12:01595 | 0.0379011 |
| NGRN | 2376 | chr15 | 88606039 | 88612816 | 0.0381059 | chr15:08860 | 0.0381059 |
| TMEM165 | 2393 | chr4 | 55952208 | 55959473 | 0.0382017 | chr4:055956 | 0.0382017 |
| FUCA2 | 2413 | chr6 | 143872020 | 143879539 | 0.0382859 | chr6:143874 | 0.0382859 |
| TRMT1-BTE | 2435 | chr19 | 13088312 | 13089953 | 0.0384303 | chr19:01308 | 0.0384303 |
| C1orf125 | 2470 | chr1 | 177596634 | 177604169 | 0.038649 | chr1:177601 | 0.038649 |
| RHBDD3-E' | 2493 | chr22 | 27993904 | 27994176 | 0.0387292 | chr22:02799 | 0.0387292 |
| HTR1B | 2501 | chr6 | 78227360 | 78235195 | 0.0387664 | chr6:078230 | 0.0387664 |
| TUFT1 | 2511 | chr1 | 149777777 | 149779392 | 0.03881 | chr1:149779 | 0.03881 |
| HOP | 2521 | chr4 | 57214456 | 57248117 | 0.0388479 | chr4:057217 | 0.0388479 |
| snR39B | 2526 | chr3 | 187984178 | 187985225 | 0.0388564 | chr3:187984 | 0.0388564 |
| SCML1 | 2543 | chrX | 17664063 | 17667516 | 0.0389306 | chrX:01766 | 0.0389306 |
| MGC11102 | 2553 | chr11 | 65526162 | 65527633 | 0.0390174 | chr11:06552 | 0.0390174 |
| CCDC124 | 2571 | chr19 | 17903915 | 17910382 | 0.039122 | chr19:01790 | 0.039122 |
| MUC1-hsa-l | 2608 | chr1 | 153429374 | 153431516 | 0.0393495 | chr1:153429 | 0.0393495 |
| BAI3 | 2612 | chr6 | 69399924 | 69407809 | 0.0393867 | chr6:069401 | 0.0393867 |
| WAC | 2647 | chr10 | 28856551 | 28921271 | 0.0395817 | chr10:02886 | 0.0395817 |
| DBX1 | 2678 | chr11 | 20136027 | 20143927 | 0.0397279 | chr11:02014 | 0.0397279 |
| RAB37 | 2681 | chr17 | 70176455 | 70255082 | 0.0397373 | chr17:07024 | 0.0397373 |
| ESR1 | 2715 | chr6 | 152165020 | 152173090 | 0.03989 | chr6:152170 | 0.03989 |
| MRPL12 | 2718 | chr17 | 77280010 | 77284959 | 0.0399072 | chr17:07728 | 0.0399072 |
| PALM2-AKA | 2738 | chr9 | 111577145 | 111582408 | 0.039993 | chr9:111581 | 0.039993 |

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|---|---|---|---|---|---|---|---|
| DR1 | 2740 | chr1 | 93578687 | 93587216 | 0.0399987 | chr1:09358 | 0.0399987 |
| MIPEP | 2744 | chr13 | 23361597 | 23361933 | 0.0400066 | chr13:0233 | 0.0400066 |
| MSX1 | 2758 | chr4 | 4906967 | 4915069 | 0.0401013 | chr4:004911 | 0.0401013 |
| LTB4DH | 2765 | chr9 | 113399385 | 113406751 | 0.0401238 | chr9:113401 | 0.0401238 |
| IDI1-WDR3 | 2767 | chr10 | 1085220 | 1092709 | 0.0401329 | chr10:0010 | 0.0401329 |
| NPR2 | 2770 | chr9 | 35776711 | 35784908 | 0.0401434 | chr9:03578 | 0.0401434 |
| TRIM62 | 2772 | chr1 | 33417466 | 33424204 | 0.0401471 | chr1:03342 | 0.0401471 |
| SLC35C1 | 2786 | chr11 | 45778842 | 45786275 | 0.0402091 | chr11:0457 | 0.0402091 |
| NAT12 | 2805 | chr14 | 56921936 | 56929542 | 0.0403058 | chr14:0569 | 0.0403058 |
| USP37-RQ | 2816 | chr2 | 219141337 | 219141904 | 0.040362 | chr2:21914 | 0.040362 |
| ARHGEF1 | 2821 | chr19 | 47077391 | 47082749 | 0.0404047 | chr19:0470 | 0.0404047 |
| BSND | 2822 | chr1 | 55232448 | 55239906 | 0.0404147 | chr1:05523 | 0.0404147 |
| PLXNA2 | 2839 | chr1 | 206481526 | 206489141 | 0.0404725 | chr1:20648 | 0.0404725 |
| DDX5-CCD | 2842 | chr17 | 59933062 | 59933636 | 0.0404944 | chr17:0599 | 0.0404944 |
| PLCD3-ACE | 2850 | chr17 | 40565554 | 40568493 | 0.0405509 | chr17:0405 | 0.0405509 |
| POLR2L-TS | 2857 | chr11 | 832585 | 832629 | 0.0405847 | chr11:0008 | 0.0405847 |
| GDI2 | 2859 | chr10 | 5892979 | 5900337 | 0.0405967 | chr10:0058 | 0.0405967 |
| FLJ44815-T | 2860 | chr17 | 29930689 | 29931839 | 0.0406034 | chr17:0299 | 0.0406034 |
| PHF8 | 2861 | chrX | 54083401 | 54092153 | 0.0406107 | chrX:0540 | 0.0406107 |
| DAG1 | 2911 | chr3 | 49478221 | 49484962 | 0.0408833 | chr3:0494 | 0.0408833 |
| SRGAP1 | 2915 | chr12 | 62519410 | 62527006 | 0.0409176 | chr12:0625 | 0.0409176 |
| KIF6 | 2919 | chr6 | 39798659 | 39806570 | 0.0409389 | chr6:0398 | 0.0409389 |
| DDX50 | 2968 | chr10 | 70325846 | 70332759 | 0.04112 | chr10:0703 | 0.04112 |
| PCDH9 | 2984 | chr13 | 66698123 | 66706030 | 0.0412074 | chr13:0667 | 0.0412074 |
| CXADR | 3019 | chr21 | 17803331 | 17809265 | 0.0413785 | chr21:0178 | 0.0413785 |
| BUB3 | 3034 | chr10 | 124900211 | 124906800 | 0.0414619 | chr10:1249 | 0.0414619 |
| ZNF555 | 3039 | chr19 | 2787380 | 2794785 | 0.0414812 | chr19:0027 | 0.0414812 |
| OGDH | 3040 | chr7 | 44607246 | 44613786 | 0.0414915 | chr7:04461 | 0.0414915 |
| DUS4L | 3054 | chr7 | 106986807 | 107006128 | 0.04154 | chr7:1069 | 0.04154 |
| TMEM15 | 3057 | chr9 | 130746008 | 130755235 | 0.0415599 | chr9:13075 | 0.0415599 |
| EFNB3 | 3063 | chr17 | 7547758 | 7552142 | 0.0415978 | chr17:0075 | 0.0415978 |
| HOXD4 | 3065 | chr2 | 176723507 | 176726977 | 0.0416 | chr2:17672 | 0.0416 |
| C10orf63-TI | 3066 | chr10 | 25345072 | 25345515 | 0.0416043 | chr10:0253 | 0.0416043 |
| RXFP3 | 3075 | chr5 | 33966793 | 33975070 | 0.0416615 | chr5:0339 | 0.0416615 |
| RUSC2 | 3115 | chr9 | 35476044 | 35482529 | 0.0418614 | chr9:0354 | 0.0418614 |
| TRNT1 | 3127 | chr3 | 3142339 | 3145732 | 0.041959 | chr3:0031 | 0.041959 |
| SULF2 | 3129 | chr20 | 45845887 | 45853102 | 0.0419652 | chr20:0458 | 0.0419652 |
| NPHS1-KIR | 3134 | chr19 | 41035097 | 41039586 | 0.0419793 | chr19:0410 | 0.0419793 |
| FUT7 | 3145 | chr9 | 139044535 | 139050710 | 0.0420115 | chr9:13905 | 0.0420115 |
| UBP1 | 3160 | chr3 | 33454091 | 33458732 | 0.0421008 | chr3:0334 | 0.0421008 |
| SIRT5 | 3169 | chr6 | 13677855 | 13720519 | 0.0421391 | chr6:0136 | 0.0421391 |
| CPT1C | 3194 | chr19 | 54883711 | 54888361 | 0.0422864 | chr19:0548 | 0.0422864 |
| CCND3 | 3200 | chr6 | 42015122 | 42022406 | 0.0423278 | chr6:0420 | 0.0423278 |
| RTN4RL1-D | 3215 | chr17 | 1875184 | 1880195 | 0.0423787 | chr17:0018 | 0.0423787 |
| ACSL1 | 3236 | chr4 | 185968722 | 185988640 | 0.0424841 | chr4:1859 | 0.0424841 |
| D15Wsu75e | 3246 | chr22 | 40346841 | 40347223 | 0.0425373 | chr22:0403 | 0.0425373 |
| BMF | 3249 | chr15 | 38183186 | 38193752 | 0.0425429 | chr15:0381 | 0.0425429 |
| EIF3S1 | 3266 | chr15 | 42611100 | 42618511 | 0.0426236 | chr15:0426 | 0.0426236 |
| C1orf69 | 3269 | chr1 | 226414773 | 226421161 | 0.0426307 | chr1:2264 | 0.0426307 |
| GRID1 | 3296 | chr10 | 88113713 | 88121661 | 0.0428111 | chr10:0881 | 0.0428111 |
| C20orf23 | 3301 | chr20 | 16499427 | 16507270 | 0.0428266 | chr20:0165 | 0.0428266 |
| UTRN | 3315 | chr6 | 144649327 | 144657098 | 0.042892 | chr6:1446 | 0.042892 |
| LRAT | 3323 | chr4 | 155876128 | 155887382 | 0.0429225 | chr4:1558 | 0.0429225 |
| LOC388969 | 3347 | chr2 | 85692776 | 85696732 | 0.0430385 | chr2:0856 | 0.0430385 |
| SLC34A3 | 3355 | chr9 | 139241505 | 139250840 | 0.0430959 | chr9:1392 | 0.0430959 |
| ADRA1D | 3386 | chr20 | 4175311 | 4183030 | 0.0432472 | chr20:0041 | 0.0432472 |
| SLC25A14 | 3398 | chrX | 129297195 | 129304437 | 0.0433175 | chrX:1293 | 0.0433175 |
| WDR57-ZC | 3407 | chr1 | 31542332 | 31542386 | 0.0433569 | chr1:0315 | 0.0433569 |

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|---|---|---|---|---|---|---|---|
| CDYL | 3409 | chr6 | 4646184 | 4723988 | 0.0433606 | chr6:00472( | 0.0433606 |
| TSSK6-NDU | 3427 | chr19 | 19487490 | 19487540 | 0.0434288 | chr19:01948 | 0.0434288 |
| NID2 | 3441 | chr14 | 51603172 | 51610255 | 0.0434794 | chr14:0516( | 0.0434794 |
| PSMD2 | 3443 | chr3 | 185493822 | 185502040 | 0.0434829 | chr3:18549 | 0.0434829 |
| HDAC11 | 3490 | chr3 | 13491442 | 13498307 | 0.0437353 | chr3:013496 | 0.0437353 |
| SAFB2-SAF | 3499 | chr19 | 5574028 | 5574072 | 0.0437973 | chr19:00557 | 0.0437973 |
| SEPT7 | 3506 | chr7 | 35801792 | 35809819 | 0.0438224 | chr7:035807 | 0.0438224 |
| SCARA3 | 3508 | chr8 | 27542756 | 27550115 | 0.0438343 | chr8:027547 | 0.0438343 |
| SETD6 | 3513 | chr16 | 57106464 | 57109342 | 0.0438554 | chr16:0571( | 0.0438554 |
| ANAPC2-S | 3535 | chr9 | 139202868 | 139202912 | 0.0439862 | chr9:139202 | 0.0439862 |
| TALDO1 | 3537 | chr11 | 732730 | 739882 | 0.043992 | chr11:00073 | 0.043992 |
| CACNA2D2 | 3548 | chr3 | 50513479 | 50521221 | 0.0440479 | chr3:050516 | 0.0440479 |
| EGFR | 3549 | chr7 | 55050686 | 55056947 | 0.0440509 | chr7:055053 | 0.0440509 |
| TIP39 | 3552 | chr19 | 54616109 | 54623999 | 0.0440738 | chr19:0546 | 0.0440738 |
| ENAH | 3558 | chr1 | 223904827 | 223912726 | 0.0441111 | chr1:223908 | 0.0441111 |
| ACTN1 | 3559 | chr14 | 68513326 | 68520964 | 0.044112 | chr14:0685 | 0.044112 |
| ONECUT1 | 3562 | chr15 | 50866922 | 50874923 | 0.0441311 | chr15:05087 | 0.0441311 |
| PLCB2 | 3579 | chr15 | 38384871 | 38392860 | 0.0442288 | chr15:03838 | 0.0442288 |
| PSMB2 | 3587 | chr1 | 35877610 | 35883913 | 0.0442655 | chr1:035879 | 0.0442655 |
| HMGCR | 3593 | chr5 | 74663414 | 74670816 | 0.0443096 | chr5:074668 | 0.0443096 |
| TMUB2 | 3596 | chr17 | 39619862 | 39624331 | 0.0443223 | chr17:0396 | 0.0443223 |
| DBNDD1 | 3599 | chr16 | 88601392 | 88613288 | 0.0443312 | chr16:0886 | 0.0443312 |
| SDF2L1 | 3610 | chr22 | 20323738 | 20328431 | 0.0443868 | chr22:02032 | 0.0443868 |
| SMAD3 | 3613 | chr15 | 65141598 | 65148059 | 0.0443917 | chr15:0651 | 0.0443917 |
| DKFZP564 | 3640 | chr11 | 63195788 | 63205359 | 0.0444969 | chr11:06319 | 0.0444969 |
| NODAL | 3642 | chr10 | 71869171 | 71876785 | 0.0445038 | chr10:07187 | 0.0445038 |
| MST4 | 3645 | chrX | 130979524 | 130987797 | 0.0445117 | chrX:13097 | 0.0445117 |
| RIPK4 | 3655 | chr21 | 42057750 | 42065793 | 0.0445621 | chr21:04206 | 0.0445621 |
| STCH | 3665 | chr21 | 14675341 | 14680927 | 0.0446471 | chr21:01467 | 0.0446471 |
| C20orf30 | 3678 | chr20 | 5039334 | 5043628 | 0.0446918 | chr20:0050 | 0.0446918 |
| SND1 | 3679 | chr7 | 127073949 | 127427454 | 0.0446966 | chr7:12707 | 0.0446966 |
| IQCB1-EAF | 3697 | chr3 | 123036633 | 123036677 | 0.0447906 | chr3:12303 | 0.0447906 |
| ASPM | 3700 | chr1 | 195379838 | 195384274 | 0.0448008 | chr1:19538 | 0.0448008 |
| CSPG4-OD | 3702 | chr15 | 73796944 | 73802086 | 0.0448046 | chr15:0738( | 0.0448046 |
| KLF7 | 3711 | chr2 | 207736313 | 207742506 | 0.0448414 | chr2:20773 | 0.0448414 |
| KCND3 | 3717 | chr1 | 112330996 | 112338351 | 0.0448555 | chr1:11233 | 0.0448555 |
| hsa-mir-424 | 3718 | chrX | 133508345 | 133513895 | 0.0448704 | chrX:13351 | 0.0448704 |
| MTERFD1-I | 3719 | chr8 | 97343025 | 97343324 | 0.0448711 | chr8:09734 | 0.0448711 |
| PKD1-RAB | 3727 | chr16 | 2128691 | 2135871 | 0.0449223 | chr16:0021 | 0.0449223 |
| OVCA2 | 3736 | chr17 | 1882047 | 1893965 | 0.0449788 | chr17:0018 | 0.0449788 |
| LONP1-TMI | 3749 | chr19 | 5671244 | 5671602 | 0.0450694 | chr19:00567 | 0.0450694 |
| PTPRZ1 | 3751 | chr7 | 121295374 | 121303116 | 0.0450762 | chr7:12130( | 0.0450762 |
| SNAI2 | 3752 | chr8 | 49993851 | 50001972 | 0.0450806 | chr8:04999 | 0.0450806 |
| PPP2R2B | 3754 | chr5 | 146235558 | 146421236 | 0.0450868 | chr5:14623 | 0.0450868 |
| EIF4ENIF1- | 3757 | chr22 | 30215927 | 30222100 | 0.0451373 | chr22:0302 | 0.0451373 |
| PPID | 3764 | chr4 | 159861722 | 159869437 | 0.0451788 | chr4:15986 | 0.0451788 |
| RPP40 | 3765 | chr6 | 4947068 | 4954619 | 0.0451812 | chr6:00494 | 0.0451812 |
| STRN3 | 3769 | chr14 | 30565440 | 30570855 | 0.0451996 | chr14:0305 | 0.0451996 |
| ANKRD16-I | 3791 | chr10 | 5971489 | 5972230 | 0.0452991 | chr10:0059 | 0.0452991 |
| ITIH5 | 3799 | chr10 | 7746675 | 7754423 | 0.0453396 | chr10:0077 | 0.0453396 |
| KDELR2 | 3803 | chr7 | 6487962 | 6493173 | 0.0453499 | chr7:00649( | 0.0453499 |
| CC2D1B | 3804 | chr1 | 52596025 | 52609194 | 0.0453597 | chr1:05260 | 0.0453597 |
| ILKAP | 3821 | chr2 | 238774495 | 238777550 | 0.0454611 | chr2:23877 | 0.0454611 |
| ABHD14B-A | 3822 | chr3 | 51983061 | 51984118 | 0.0454634 | chr3:05198 | 0.0454634 |
| SREBF2 | 3824 | chr22 | 40553716 | 40629229 | 0.0454765 | chr22:0405 | 0.0454765 |
| POLG | 3828 | chr15 | 87676581 | 87684225 | 0.045486 | chr15:0876 | 0.045486 |
| FUBP3 | 3831 | chr9 | 132440030 | 132447365 | 0.0454992 | chr9:13244 | 0.0454992 |
| MPDU1 | 3843 | chr17 | 7426364 | 7432162 | 0.0455806 | chr17:0074 | 0.0455806 |

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|---|---|---|---|---|---|---|---|
| SENP6 | 3855 | chr6 | 76362862 | 76370712 | 0.0456487 | chr6:076368 | 0.0456487 |
| EIF4E3-GPI | 3864 | chr3 | 71885617 | 71885910 | 0.0456836 | chr3:071885 | 0.0456836 |
| ZNF148 | 3867 | chr3 | 126574548 | 126582360 | 0.0456966 | chr3:126577 | 0.0456966 |
| GBA2 | 3875 | chr9 | 35739382 | 35742779 | 0.0457482 | chr9:035739 | 0.0457482 |
| KCNB1 | 3888 | chr20 | 47529960 | 47537421 | 0.0457969 | chr20:04753 | 0.0457969 |
| CEP63 | 3892 | chr3 | 135681811 | 135691051 | 0.0458388 | chr3:135687 | 0.0458388 |
| ADCK4-ITP | 3932 | chr19 | 45914502 | 45914754 | 0.0460411 | chr19:04591 | 0.0460411 |
| NUDT6 | 3953 | chr4 | 124058274 | 124063450 | 0.0461309 | chr4:124063 | 0.0461309 |
| TSC22D1 | 3967 | chr13 | 43906377 | 44054200 | 0.0462322 | chr13:04390 | 0.0462322 |
| ITFG1-PHK | 3976 | chr16 | 46052584 | 46052628 | 0.0463086 | chr16:04605 | 0.0463086 |
| RASGRP1 | 3986 | chr15 | 36641794 | 36647088 | 0.0463595 | chr15:03664 | 0.0463595 |
| NDUFA11-V | 3993 | chr19 | 5855088 | 5855802 | 0.0464077 | chr19:00585 | 0.0464077 |
| FAM104A-C | 3995 | chr17 | 68740037 | 68740827 | 0.0464207 | chr17:06874 | 0.0464207 |
| CA13 | 4001 | chr8 | 86344103 | 86347624 | 0.0464534 | chr8:086345 | 0.0464534 |
| TCEB1-TMI | 4005 | chr8 | 75047124 | 75050780 | 0.0464773 | chr8:075047 | 0.0464773 |
| CDC42BPB | 4008 | chr14 | 102591110 | 102598603 | 0.0464859 | chr14:10259 | 0.0464859 |
| SPG7 | 4019 | chr16 | 88098030 | 88151691 | 0.046534 | chr16:08810 | 0.046534 |
| VGLL3 | 4032 | chr3 | 87120644 | 87128306 | 0.0466026 | chr3:087122 | 0.0466026 |
| SSTR5 | 4052 | chr16 | 1063352 | 1071361 | 0.0466804 | chr16:00106 | 0.0466804 |
| PCDH8 | 4055 | chr13 | 52318306 | 52325848 | 0.0467103 | chr13:05232 | 0.0467103 |
| TFAP2C | 4063 | chr20 | 54632708 | 54640470 | 0.0467652 | chr20:05463 | 0.0467652 |
| NEUROD2 | 4073 | chr17 | 35015186 | 35023120 | 0.0467889 | chr17:03501 | 0.0467889 |
| METTL9 | 4078 | chr16 | 21514677 | 21576924 | 0.0468055 | chr16:02151 | 0.0468055 |
| ZNF436-C1 | 4092 | chr1 | 23567524 | 23568010 | 0.0468585 | chr1:023567 | 0.0468585 |
| ACA48 | 4100 | chr17 | 7416899 | 7418756 | 0.0468871 | chr17:00741 | 0.0468871 |
| CXCL2 | 4104 | chr4 | 75181533 | 75189235 | 0.0469081 | chr4:075184 | 0.0469081 |
| EVI1 | 4111 | chr3 | 170344352 | 170352485 | 0.0469388 | chr3:170347 | 0.0469388 |
| BRD9 | 4112 | chr5 | 940713 | 945916 | 0.0469419 | chr5:000944 | 0.0469419 |
| PTK6 | 4130 | chr20 | 61636740 | 61642285 | 0.0470445 | chr20:06164 | 0.0470445 |
| TEX14-RAI | 4136 | chr17 | 54124441 | 54124824 | 0.0470751 | chr17:05412 | 0.0470751 |
| MYLK | 4149 | chr3 | 125083556 | 125089990 | 0.0471135 | chr3:125086 | 0.0471135 |
| TA-NFKBH- | 4168 | chr19 | 41083469 | 41084158 | 0.0472366 | chr19:04108 | 0.0472366 |
| CHES1 | 4183 | chr14 | 88691136 | 88957132 | 0.0473131 | chr14:08895 | 0.0473131 |
| ITGB1BP3 | 4189 | chr19 | 3879413 | 3885550 | 0.0473374 | chr19:00388 | 0.0473374 |
| FMNL2 | 4192 | chr2 | 152894915 | 152902673 | 0.0473461 | chr2:152899 | 0.0473461 |
| IL28A | 4205 | chr19 | 44446309 | 44453165 | 0.0474349 | chr19:04444 | 0.0474349 |
| M6PR | 4218 | chr12 | 8991127 | 8996104 | 0.0475157 | chr12:00899 | 0.0475157 |
| CDKL3-UBI | 4228 | chr5 | 133730159 | 133734670 | 0.0475547 | chr5:133730 | 0.0475547 |
| C14orf149-( | 4232 | chr14 | 59020904 | 59020948 | 0.0475853 | chr14:05902 | 0.0475853 |
| IRAK3 | 4238 | chr12 | 64868025 | 64871753 | 0.047604 | chr12:06486 | 0.047604 |
| GFPT1 | 4256 | chr2 | 69465584 | 69473181 | 0.0476914 | chr2:069467 | 0.0476914 |
| MAD1L1 | 4268 | chr7 | 2234059 | 2240477 | 0.0477441 | chr7:002239 | 0.0477441 |
| AQP11 | 4270 | chr11 | 76975408 | 76981190 | 0.0477587 | chr11:07697 | 0.0477587 |
| DCBLD2 | 4278 | chr3 | 100100397 | 100108694 | 0.0478257 | chr3:100103 | 0.0478257 |
| CBLN3-KIA | 4283 | chr14 | 23968733 | 23969028 | 0.0478459 | chr14:02396 | 0.0478459 |
| LPIN1 | 4306 | chr2 | 11798825 | 11806689 | 0.0479557 | chr2:011801 | 0.0479557 |
| PELO | 4313 | chr5 | 52114055 | 52134104 | 0.0479781 | chr5:052119 | 0.0479781 |
| ERLIN1 | 4315 | chr10 | 101933015 | 101938127 | 0.0479811 | chr10:10193 | 0.0479811 |
| KCNK10 | 4316 | chr14 | 87804897 | 87868432 | 0.0479826 | chr14:08786 | 0.0479826 |
| FLJ22662 | 4319 | chr12 | 14609936 | 14617574 | 0.0480087 | chr12:01461 | 0.0480087 |
| CFL1-MUS8 | 4326 | chr11 | 65382443 | 65384492 | 0.0480396 | chr11:06538 | 0.0480396 |
| AUH | 4345 | chr9 | 93161494 | 93169532 | 0.048165 | chr9:093164 | 0.048165 |
| MTERF | 4346 | chr7 | 91345444 | 91352620 | 0.0481659 | chr7:091348 | 0.0481659 |
| RHEB | 4356 | chr7 | 150845548 | 150852640 | 0.0482079 | chr7:150848 | 0.0482079 |
| SLC44A5 | 4370 | chr1 | 75847507 | 75854814 | 0.0482777 | chr1:075854 | 0.0482777 |
| PAX6 | 4371 | chr11 | 31787054 | 31794909 | 0.0482817 | chr11:03179 | 0.0482817 |
| TGFBR1 | 4378 | chr9 | 100903767 | 100909753 | 0.0483477 | chr9:100906 | 0.0483477 |
| PTPN9 | 4401 | chr15 | 73656287 | 73663773 | 0.0484713 | chr15:07365 | 0.0484713 |

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|---|---|---|---|---|---|---|---|
| TRIM24 | 4408 | chr7 | 137791390 | 137797164 | 0.0484961 | chr7:13779 | 0.0484961 |
| ATF4 | 4420 | chr22 | 38244221 | 38249419 | 0.0485853 | chr22:0382 | 0.0485853 |
| RNPC3 | 4435 | chr1 | 103835693 | 103843730 | 0.0486856 | chr1:10384 | 0.0486856 |
| MAN1B1 | 4436 | chr9 | 139098926 | 139103688 | 0.0486893 | chr9:13909 | 0.0486893 |
| RNASEN-C | 4439 | chr5 | 31568049 | 31568093 | 0.0487042 | chr5:03156 | 0.0487042 |
| RNF4 | 4441 | chr4 | 2435321 | 2441912 | 0.048709 | chr4:00244 | 0.048709 |
| OTP | 4442 | chr5 | 76967666 | 76975767 | 0.0487115 | chr5:07697 | 0.0487115 |
| ST18 | 4444 | chr8 | 53482535 | 53490313 | 0.04872 | chr8:05348 | 0.04872 |
| OSR2 | 4449 | chr8 | 100020477 | 100028281 | 0.0487459 | chr8:10002 | 0.0487459 |
| ETF1 | 4457 | chr5 | 137904206 | 137912263 | 0.0487709 | chr5:13790 | 0.0487709 |
| NDUFB7 | 4465 | chr19 | 14542993 | 14544283 | 0.0488107 | chr19:0145 | 0.0488107 |
| HPS5-GTF2 | 4484 | chr11 | 18300343 | 18300710 | 0.0488985 | chr11:0183 | 0.0488985 |
| FAM3A | 4501 | chrX | 153396922 | 153401502 | 0.0489882 | chrX:15339 | 0.0489882 |
| C22orf32 | 4509 | chr22 | 40805605 | 40808105 | 0.0490314 | chr22:0408 | 0.0490314 |
| NME6 | 4536 | chr3 | 48315331 | 48323328 | 0.0491724 | chr3:04831 | 0.0491724 |
| PTEN | 4538 | chr10 | 89608145 | 89615815 | 0.0491793 | chr10:0896 | 0.0491793 |
| CXXC1 | 4545 | chr18 | 46062697 | 46073371 | 0.0491982 | chr18:0460 | 0.0491982 |
| PLK1 | 4549 | chr16 | 23592287 | 23600069 | 0.0492446 | chr16:0235 | 0.0492446 |
| DHX36 | 4550 | chr3 | 155522603 | 155526544 | 0.0492542 | chr3:15552 | 0.0492542 |
| ERBB2 | 4557 | chr17 | 35097985 | 35138346 | 0.0492886 | chr17:0351 | 0.0492886 |
| RASGRF1 | 4606 | chr15 | 77167985 | 77175422 | 0.049561 | chr15:07717 | 0.049561 |
| SIAH2 | 4625 | chr3 | 151960816 | 151968943 | 0.0496394 | chr3:15196 | 0.0496394 |
| ACR | 4633 | chr22 | 49518500 | 49525847 | 0.0496824 | chr22:0495 | 0.0496824 |
| hsa-mir-34c | 4642 | chr11 | 110889010 | 110889387 | 0.0497372 | chr11:11088 | 0.0497372 |
| NXF1 | 4652 | chr11 | 62326962 | 62330874 | 0.0497764 | chr11:06232 | 0.0497764 |
| ZNF345 | 4677 | chr19 | 42031312 | 42034839 | 0.0499423 | chr19:0420 | 0.0499423 |
| DUSP6 | 4686 | chr12 | 88267527 | 88275916 | 0.0499806 | chr12:08827 | 0.0499806 |

**HPSE- bound genes (5'-transcribe region)** **NS subset (100 genes)**

| Gene | Rank (Hep-I | Chromosom | Start | End | Min P(Xbar) | Probe | P(Xbar) |
|---|---|---|---|---|---|---|---|
| RABL3 | 194 | chr3 | 121941663 | 121943969 | 0.0131583 | chr3:12194 | 0.0131583 |
| TMEM142C | 232 | chr16 | 30862929 | 30873749 | 0.0136866 | chr16:0308 | 0.0136866 |
| CCDC53 | 243 | chr12 | 100977458 | 100985326 | 0.0138668 | chr12:1009 | 0.0138668 |
| RAB33A | 551 | chrX | 129133458 | 129136232 | 0.0176868 | chrX:12913 | 0.0176868 |
| C20orf39 | 578 | chr20 | 24392389 | 24400779 | 0.0180102 | chr20:0243 | 0.0180102 |
| MOSPD1 | 608 | chrX | 133875079 | 133882371 | 0.0183136 | chrX:13387 | 0.0183136 |
| UQCRB | 638 | chr8 | 97314630 | 97320808 | 0.0185489 | chr8:097316 | 0.0185489 |
| LRRC42 | 698 | chr1 | 54184671 | 54189370 | 0.0190989 | chr1:05418 | 0.0190989 |
| UTY | 732 | chrY | 14098734 | 14104150 | 0.0193509 | chrY:01410 | 0.0193509 |
| LDB3 | 775 | chr10 | 88416321 | 88420857 | 0.019742 | chr10:0884 | 0.019742 |
| PSMC2 | 820 | chr7 | 102775432 | 102777878 | 0.0200681 | chr7:10277 | 0.0200681 |
| NAG6 | 851 | chr7 | 128214160 | 128221780 | 0.0202909 | chr7:12821 | 0.0202909 |
| DGCR13 | 884 | chr22 | 17500292 | 17501269 | 0.0206036 | chr22:0175 | 0.0206036 |
| ADD3 | 984 | chr10 | 111750282 | 111760154 | 0.0213032 | chr10:11175 | 0.0213032 |
| MSN | 1135 | chrX | 64801280 | 64806845 | 0.0223784 | chrX:06480 | 0.0223784 |
| PNMT | 1200 | chr17 | 35076410 | 35080409 | 0.0227792 | chr17:0350 | 0.0227792 |
| KIRREL | 1224 | chr1 | 156224278 | 156232618 | 0.0229067 | chr1:15622 | 0.0229067 |
| BCAM | 1229 | chr19 | 49998983 | 50006427 | 0.0229344 | chr19:0500 | 0.0229344 |
| FGFBP2 | 1249 | chr4 | 15572077 | 15579453 | 0.023057 | chr4:01557 | 0.023057 |
| KIAA0913 | 1271 | chr10 | 75215413 | 75224569 | 0.0231757 | chr10:0752 | 0.0231757 |
| RBM18 | 1279 | chr9 | 124061614 | 124066800 | 0.023246 | chr9:12406 | 0.023246 |
| CACNG8 | 1293 | chr19 | 59152587 | 59160526 | 0.0233191 | chr19:0591 | 0.0233191 |
| ITFG2 | 1312 | chr12 | 2786772 | 2793831 | 0.0234413 | chr12:0027 | 0.0234413 |
| PRKCSH | 1323 | chr19 | 11407279 | 11410038 | 0.0235337 | chr19:0114 | 0.0235337 |
| TSHR | 1347 | chr14 | 80490879 | 80494120 | 0.0237409 | chr14:0804 | 0.0237409 |
| FAM84A | 1367 | chr2 | 14684767 | 14693940 | 0.0238935 | chr2:01469 | 0.0238935 |
| RNASEH2C | 1512 | chr11 | 65242363 | 65246854 | 0.0247987 | chr11:06524 | 0.0247987 |

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|---|---|---|---|---|---|---|---|
| ZFP95 | 1551 | chr7 | 98940248 | 98942735 | 0.0250142 | chr7:09894 | 0.0250142 |
| SCN1B | 1587 | chr19 | 40209265 | 40223178 | 0.0252677 | chr19:0402 | 0.0252677 |
| SIRPA | 1662 | chr20 | 1817846 | 1826500 | 0.0257116 | chr20:0018 | 0.0257116 |
| CYP2F1 | 1796 | chr19 | 46309723 | 46314592 | 0.0264738 | chr19:0463 | 0.0264738 |
| ZC3H7B | 1850 | chr22 | 40025525 | 40034265 | 0.0267762 | chr22:0400 | 0.0267762 |
| NONO | 1859 | chrX | 70416859 | 70436996 | 0.0267952 | chrX:0704 | 0.0267952 |
| SLC27A3 | 1951 | chr1 | 152013401 | 152016916 | 0.0273141 | chr1:15201 | 0.0273141 |
| VSIG2 | 1961 | chr11 | 124124814 | 124128133 | 0.0274094 | chr11:1241 | 0.0274094 |
| BECN1 | 2001 | chr17 | 38229369 | 38229820 | 0.0275957 | chr17:0382 | 0.0275957 |
| EVI5L | 2029 | chr19 | 7798292 | 7819921 | 0.027703 | chr19:0078 | 0.027703 |
| ITPR3 | 2070 | chr6 | 33693965 | 33699729 | 0.0279564 | chr6:03369 | 0.0279564 |
| PNPLA7 | 2113 | chr9 | 139560799 | 139564633 | 0.0281454 | chr9:13956 | 0.0281454 |
| CDC27 | 2149 | chr17 | 42619272 | 42626997 | 0.0283855 | chr17:0426 | 0.0283855 |
| TNFSF15 | 2205 | chr9 | 116606453 | 116613454 | 0.0286714 | chr9:11660 | 0.0286714 |
| RILP | 2212 | chr17 | 1496444 | 1500660 | 0.0287055 | chr17:0015 | 0.0287055 |
| CCDC27 | 2248 | chr1 | 3658981 | 3661351 | 0.0289538 | chr1:0036 | 0.0289538 |
| ARHGDIG | 2252 | chr16 | 270714 | 272999 | 0.0289854 | chr16:0002 | 0.0289854 |
| HPD | 2308 | chr12 | 120778720 | 120782957 | 0.0293536 | chr12:1207 | 0.0293536 |
| RNF165 | 2336 | chr18 | 42163009 | 42171113 | 0.0294951 | chr18:0421 | 0.0294951 |
| RPL35A | 2408 | chr3 | 199156177 | 199166524 | 0.0299575 | chr3:19916 | 0.0299575 |
| CYorf15A | 2411 | chrY | 20183254 | 20211425 | 0.0299761 | chrY:0201 | 0.0299761 |
| C3 | 2521 | chr19 | 6669274 | 6676663 | 0.0305816 | chr19:0066 | 0.0305816 |
| RBM5 | 2526 | chr3 | 50095993 | 50103745 | 0.0306439 | chr3:0501 | 0.0306439 |
| ARHGDIB | 2549 | chr12 | 14986225 | 15007082 | 0.0307579 | chr12:0150 | 0.0307579 |
| SLC10A3 | 2565 | chrX | 153368815 | 153375386 | 0.0308347 | chrX:1533 | 0.0308347 |
| RCE1 | 2651 | chr11 | 66367440 | 66369970 | 0.0312845 | chr11:0663 | 0.0312845 |
| SLC22A6 | 2764 | chr11 | 62506377 | 62514349 | 0.0318842 | chr11:0625 | 0.0318842 |
| MAFF | 2794 | chr22 | 36924605 | 36942023 | 0.0319484 | chr22:0369 | 0.0319484 |
| WNT10B | 2807 | chr12 | 47648245 | 47651753 | 0.0320499 | chr12:0476 | 0.0320499 |
| PUNC | 2817 | chr15 | 63454809 | 63460840 | 0.0320821 | chr15:0634 | 0.0320821 |
| SERPINA1 | 2868 | chr14 | 93922196 | 93932250 | 0.0324559 | chr14:0939 | 0.0324559 |
| PF4V1 | 2871 | chr4 | 74932557 | 74940337 | 0.0324686 | chr4:07493 | 0.0324686 |
| ZBTB32 | 2924 | chr19 | 40890773 | 40899768 | 0.0326902 | chr19:0408 | 0.0326902 |
| CXorf43 | 2946 | chrX | 83641671 | 83649590 | 0.0328189 | chrX:0836 | 0.0328189 |
| RNF13 | 2947 | chr3 | 151010339 | 151016197 | 0.0328249 | chr3:1510 | 0.0328249 |
| PPHLN1 | 2948 | chr12 | 41006292 | 41011708 | 0.0328265 | chr12:0410 | 0.0328265 |
| ARRB1 | 3118 | chr11 | 74722000 | 74745754 | 0.0335802 | chr11:0747 | 0.0335802 |
| P2RY8 | 3131 | chrY | 1613682 | 1621497 | 0.0336432 | chrY:0016 | 0.0336432 |
| CDCA5 | 3192 | chr11 | 64602889 | 64607960 | 0.0340215 | chr11:0646 | 0.0340215 |
| SGEF | 3256 | chr3 | 155316443 | 155324331 | 0.0343151 | chr3:1553 | 0.0343151 |
| DPH1 | 3264 | chr17 | 1880270 | 1880956 | 0.0343446 | chr17:0018 | 0.0343446 |
| COL9A3 | 3271 | chr20 | 60916036 | 60921362 | 0.0343821 | chr20:0609 | 0.0343821 |
| ADCYAP1 | 3278 | chr18 | 889825 | 897830 | 0.0344281 | chr18:0008 | 0.0344281 |
| PHB | 3287 | chr17 | 44845048 | 44847769 | 0.0344737 | chr17:0448 | 0.0344737 |
| ARSA | 3363 | chr22 | 49410551 | 49414418 | 0.0348477 | chr22:0494 | 0.0348477 |
| ZNF446 | 3422 | chr19 | 63676598 | 63682889 | 0.0351338 | chr19:0636 | 0.0351338 |
| ASB18 | 3457 | chr2 | 236812686 | 236820469 | 0.0353252 | chr2:2368 | 0.0353252 |
| PGF | 3492 | chr14 | 74489491 | 74497571 | 0.0355211 | chr14:0744 | 0.0355211 |
| BAT3 | 3588 | chr6 | 31725146 | 31728240 | 0.0360355 | chr6:0317 | 0.0360355 |
| HOXB6 | 3668 | chr17 | 44028219 | 44039612 | 0.0364593 | chr17:0440 | 0.0364593 |
| PRSS36 | 3717 | chr16 | 31057912 | 31073511 | 0.0366747 | chr16:0310 | 0.0366747 |
| STXBP1 | 3774 | chr9 | 129408984 | 129416697 | 0.0369701 | chr9:1294 | 0.0369701 |
| OXA1L | 3949 | chr14 | 22305556 | 22307605 | 0.0378849 | chr14:0223 | 0.0378849 |
| TMEM2 | 4028 | chr9 | 73571241 | 73578636 | 0.0383527 | chr9:0735 | 0.0383527 |
| F25965 | 4039 | chr19 | 40929836 | 40937219 | 0.0383862 | chr19:0409 | 0.0383862 |
| KIAA0101 | 4094 | chr15 | 62459094 | 62460637 | 0.0386766 | chr15:0624 | 0.0386766 |
| MT1E | 4121 | chr16 | 55212181 | 55217482 | 0.0387954 | chr16:055 | 0.0387954 |
| ZH2C2 | 4141 | chr5 | 102481818 | 102483722 | 0.0389121 | chr5:1024 | 0.0389121 |

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|---|---|---|---|---|---|---|---|
| THAP6 | 4283 | chr4 | 76658729 | 76662473 | 0.0397759 | chr4:076658 | 0.0397759 |
| TMEM95 | 4320 | chr17 | 7198961 | 7201259 | 0.0399539 | chr17:00719 | 0.0399539 |
| AOC2 | 4468 | chr17 | 38249314 | 38255976 | 0.0407488 | chr17:03825 | 0.0407488 |
| ITGBL1 | 4520 | chr13 | 100898340 | 100905658 | 0.0410757 | chr13:1009( | 0.0410757 |
| ASPHD1 | 4544 | chr16 | 29819839 | 29823504 | 0.0412373 | chr16:0298' | 0.0412373 |
| ARID3B | 4743 | chr15 | 72615309 | 72623120 | 0.0423016 | chr15:0726: | 0.0423016 |
| XRCC3 | 4753 | chr14 | 103247091 | 103251348 | 0.0423582 | chr14:1032- | 0.0423582 |
| NDUFB8 | 4764 | chr10 | 102273469 | 102279638 | 0.042423 | chr10:10227 | 0.042423 |
| TMEM49 | 4821 | chr17 | 55139863 | 55273111 | 0.0427525 | chr17:0552( | 0.0427525 |
| NDUFA7 | 5104 | chr19 | 8282386 | 8292263 | 0.044462 | chr19:00828 | 0.044462 |
| ARR3 | 5211 | chrX | 69404923 | 69407099 | 0.0450598 | chrX:06940! | 0.0450598 |
| ARMC7 | 5390 | chr17 | 70613849 | 70637946 | 0.0461866 | chr17:0706: | 0.0461866 |
| ACRC | 5442 | chrX | 70712439 | 70717514 | 0.0465361 | chrX:07071( | 0.0465361 |
| BIVM | 5503 | chr13 | 102249491 | 102291867 | 0.0468649 | chr13:1022! | 0.0468649 |
| CNGA4 | 5694 | chr11 | 6217007 | 6217792 | 0.0481682 | chr11:00621 | 0.0481682 |

**HPSE- bound genes (5'-transcribe region)** **NS and ST subset (1636 ge**

| Gene | Rank (Hep- | Chromosom | Start | End | Min P(Xbar) | Probe | P(Xbar) |
|---|---|---|---|---|---|---|---|
| TCF7L1 | 2 | chr2 | 85210668 | 85216848 | 0.0116767 | chr2:085214 | 0.0116767 |
| KLHL9 | 8 | chr9 | 21322492 | 21330561 | 0.0140998 | chr9:021322 | 0.0140998 |
| KCNJ3 | 10 | chr2 | 155258009 | 155266054 | 0.0141896 | chr2:15526: | 0.0141896 |
| MTR | 11 | chr1 | 235020572 | 235028125 | 0.0142119 | chr1:23502! | 0.0142119 |
| DMRTA1 | 12 | chr9 | 22434616 | 22439381 | 0.0143869 | chr9:022437 | 0.0143869 |
| FAM84B | 13 | chr8 | 127636475 | 127645178 | 0.0144173 | chr8:12763( | 0.0144173 |
| EPB41L4B | 14 | chr9 | 111120375 | 111127549 | 0.0145209 | chr9:111121 | 0.0145209 |
| UAP1 | 15 | chr1 | 160793015 | 160800415 | 0.0148367 | chr1:160797 | 0.0148367 |
| NFIA | 17 | chr1 | 61315237 | 61323540 | 0.0149073 | chr1:06132' | 0.0149073 |
| LAMB1 | 18 | chr7 | 107428078 | 107436245 | 0.0150184 | chr7:10743( | 0.0150184 |
| TRIM41 | 19 | chr5 | 180577481 | 180585626 | 0.0150715 | chr5:18058: | 0.0150715 |
| C1orf63 | 21 | chr1 | 25443569 | 25451436 | 0.0152483 | chr1:025446 | 0.0152483 |
| HCN1 | 22 | chr5 | 45729667 | 45737448 | 0.0153259 | chr5:04573( | 0.0153259 |
| SURF1 | 24 | chr9 | 135208455 | 135212884 | 0.0154692 | chr9:13520( | 0.0154692 |
| BASP1 | 25 | chr5 | 17266367 | 17276009 | 0.0154919 | chr5:017272 | 0.0154919 |
| RUFY1 | 27 | chr5 | 178907545 | 178922080 | 0.0155896 | chr5:17891! | 0.0155896 |
| PITX1 | 29 | chr5 | 134395093 | 134403698 | 0.0157631 | chr5:13439( | 0.0157631 |
| HES3 | 31 | chr1 | 6226304 | 6229490 | 0.0159196 | chr1:006226 | 0.0159196 |
| GNB2 | 32 | chr7 | 100105742 | 100111881 | 0.0159318 | chr7:10011( | 0.0159318 |
| ARHGEF3 | 36 | chr3 | 56808578 | 56816484 | 0.015994 | chr3:05681( | 0.015994 |
| GFPT2 | 37 | chr5 | 179710426 | 179718156 | 0.0160698 | chr5:179711 | 0.0160698 |
| LPHN2 | 40 | chr1 | 82033244 | 82041119 | 0.0164591 | chr1:08204( | 0.0164591 |
| OTOF | 41 | chr2 | 26551726 | 26640328 | 0.0165706 | chr2:02655- | 0.0165706 |
| G3BP2 | 44 | chr4 | 76815173 | 76821973 | 0.0167592 | chr4:076816 | 0.0167592 |
| DNPEP | 45 | chr2 | 219958495 | 219965250 | 0.0167601 | chr2:21996( | 0.0167601 |
| MLF1 | 46 | chr3 | 159766290 | 159774263 | 0.0168435 | chr3:15977' | 0.0168435 |
| DDAH2 | 47 | chr6 | 31802519 | 31806268 | 0.0168639 | chr6:03180! | 0.0168639 |
| TTPA | 48 | chr8 | 64159755 | 64164876 | 0.017068 | chr8:06416( | 0.017068 |
| SOHLH1 | 50 | chr9 | 137728351 | 137731152 | 0.0171472 | chr9:13772! | 0.0171472 |
| FAM43B | 51 | chr1 | 20747574 | 20754521 | 0.017157 | chr1:020753 | 0.017157 |
| GBX2 | 52 | chr2 | 236738888 | 236746869 | 0.0172486 | chr2:23674' | 0.0172486 |
| THADA | 53 | chr2 | 43675957 | 43678413 | 0.0172961 | chr2:043676 | 0.0172961 |
| UPP1 | 54 | chr7 | 48089530 | 48097920 | 0.0173265 | chr7:04809! | 0.0173265 |
| C5orf24 | 56 | chr5 | 134204745 | 134210811 | 0.0174446 | chr5:13421( | 0.0174446 |
| CCDC28B | 57 | chr1 | 32436470 | 32443501 | 0.017452 | chr1:032443 | 0.017452 |
| POLE3 | 58 | chr9 | 115209329 | 115212735 | 0.0174682 | chr9:115212 | 0.0174682 |
| DDEF2 | 60 | chr2 | 9259139 | 9267127 | 0.0175644 | chr2:009265 | 0.0175644 |
| LOC388969 | 62 | chr2 | 85687733 | 85692561 | 0.0177237 | chr2:085692 | 0.0177237 |
| WWTR1 | 63 | chr3 | 150856171 | 150863854 | 0.0178209 | chr3:150857 | 0.0178209 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CENTG2 | 64 | chr2 | 236062780 | 236070461 | 0.0178547 | chr2:236068 | 0.0178547 |
| ZFYVE28 | 65 | chr4 | 2387705 | 2395594 | 0.0178759 | chr4:002389 | 0.0178759 |
| KIAA0408 | 66 | chr6 | 127835937 | 127844051 | 0.0178769 | chr6:127838 | 0.0178769 |
| ZHX1 | 68 | chr8 | 124353204 | 124360983 | 0.0179549 | chr8:124355 | 0.0179549 |
| TMEM178 | 69 | chr2 | 39741052 | 39748791 | 0.0179993 | chr2:039747 | 0.0179993 |
| TMEM23 | 71 | chr10 | 52051486 | 52058206 | 0.0180147 | chr10:05205 | 0.0180147 |
| EIF4G3 | 72 | chr1 | 21308383 | 21378799 | 0.0180191 | chr1:021375 | 0.0180191 |
| L3MBTL3 | 75 | chr6 | 130376098 | 130383822 | 0.0180603 | chr6:130383 | 0.0180603 |
| TM2D1 | 76 | chr1 | 61960934 | 61967371 | 0.0180954 | chr1:061963 | 0.0180954 |
| FLNC | 77 | chr7 | 128252631 | 128286549 | 0.0181194 | chr7:128259 | 0.0181194 |
| LHX6 | 78 | chr9 | 124028304 | 124036035 | 0.0181358 | chr9:124028 | 0.0181358 |
| CYP1B1 | 79 | chr2 | 38153796 | 38161210 | 0.0182076 | chr2:038156 | 0.0182076 |
| CPNE9 | 80 | chr3 | 9719077 | 9746611 | 0.0182812 | chr3:009721 | 0.0182812 |
| PRKCE | 83 | chr2 | 45727326 | 45735013 | 0.0183754 | chr2:045732 | 0.0183754 |
| GABRB2 | 85 | chr5 | 160903987 | 160912706 | 0.0184488 | chr5:160906 | 0.0184488 |
| EN2 | 86 | chr7 | 154936758 | 154944651 | 0.0184666 | chr7:154943 | 0.0184666 |
| DAB2IP | 91 | chr9 | 123496019 | 123547310 | 0.0186485 | chr9:123502 | 0.0186485 |
| NIT1 | 92 | chr1 | 159354504 | 159357433 | 0.0186549 | chr1:159355 | 0.0186549 |
| TFAP2B | 93 | chr6 | 50889428 | 50897008 | 0.0186595 | chr6:050895 | 0.0186595 |
| CCDC4 | 94 | chr4 | 41847227 | 41852307 | 0.0186604 | chr4:041849 | 0.0186604 |
| ACAD11 | 95 | chr3 | 133804251 | 133861513 | 0.0186679 | chr3:133861 | 0.0186679 |
| C3orf21 | 98 | chr3 | 196470804 | 196478605 | 0.0187853 | chr3:196472 | 0.0187853 |
| PDE1C | 99 | chr7 | 32074251 | 32082164 | 0.0187954 | chr7:032077 | 0.0187954 |
| NMNAT3 | 101 | chr3 | 140877079 | 140884966 | 0.018847 | chr3:140879 | 0.018847 |
| GPR137B | 102 | chr1 | 234370019 | 234374999 | 0.0188874 | chr1:234372 | 0.0188874 |
| CNIH3 | 103 | chr1 | 222866130 | 222874015 | 0.0189033 | chr1:222870 | 0.0189033 |
| SRF | 105 | chr6 | 43242360 | 43257222 | 0.0190022 | chr6:043247 | 0.0190022 |
| OBFC2A | 106 | chr2 | 192246566 | 192254058 | 0.0190107 | chr2:192251 | 0.0190107 |
| SPACA1 | 108 | chr6 | 88810441 | 88815901 | 0.0190577 | chr6:088814 | 0.0190577 |
| CPA1 | 110 | chr7 | 129802064 | 129809409 | 0.0191305 | chr7:129807 | 0.0191305 |
| FOXL2 | 111 | chr3 | 140145962 | 140153981 | 0.0191517 | chr3:140146 | 0.0191517 |
| SP8 | 113 | chr7 | 20789378 | 20798473 | 0.0192092 | chr7:020791 | 0.0192092 |
| FNTA | 117 | chr8 | 43029894 | 43033169 | 0.0193517 | chr8:043031 | 0.0193517 |
| CADPS2 | 120 | chr7 | 122123743 | 122319199 | 0.0194078 | chr7:122313 | 0.0194078 |
| MRPS30 | 121 | chr5 | 44839346 | 44847342 | 0.0194082 | chr5:044845 | 0.0194082 |
| C20orf132 | 123 | chr20 | 35240871 | 35246907 | 0.0194394 | chr20:03524 | 0.0194394 |
| ANKRD38 | 128 | chr1 | 62555468 | 62561112 | 0.0197125 | chr1:062556 | 0.0197125 |
| PRLR | 131 | chr5 | 35123368 | 35270394 | 0.0198121 | chr5:035266 | 0.0198121 |
| UNC93A | 135 | chr6 | 167619302 | 167627341 | 0.0199185 | chr6:167627 | 0.0199185 |
| RDBP | 136 | chr6 | 32034572 | 32044751 | 0.0199225 | chr6:032034 | 0.0199225 |
| PGBD1 | 137 | chr6 | 28353965 | 28359820 | 0.0199853 | chr6:028357 | 0.0199853 |
| NHLH2 | 138 | chr1 | 116182743 | 116189019 | 0.0199973 | chr1:116183 | 0.0199973 |
| NID1 | 139 | chr1 | 234293948 | 234299963 | 0.0200723 | chr1:234294 | 0.0200723 |
| FIGLA | 141 | chr2 | 70869079 | 70876773 | 0.0201408 | chr2:070870 | 0.0201408 |
| FBXL6 | 144 | chr8 | 145547531 | 145552955 | 0.0201603 | chr8:145551 | 0.0201603 |
| RAB43 | 146 | chr3 | 130320845 | 130328748 | 0.0202329 | chr3:130322 | 0.0202329 |
| HOXD12 | 147 | chr2 | 176668922 | 176673696 | 0.0202682 | chr2:176673 | 0.0202682 |
| F13A1 | 153 | chr6 | 6263653 | 6271418 | 0.0203996 | chr6:006265 | 0.0203996 |
| ITPKB | 154 | chr1 | 224989444 | 224996200 | 0.0204047 | chr1:224990 | 0.0204047 |
| KCNE4 | 156 | chr2 | 223619704 | 223627714 | 0.0204335 | chr2:223626 | 0.0204335 |
| ANTXR1 | 157 | chr2 | 69088620 | 69095727 | 0.0204405 | chr2:069094 | 0.0204405 |
| PPP3CA | 158 | chr4 | 102484710 | 102492717 | 0.0204872 | chr4:102486 | 0.0204872 |
| SMARCD3 | 159 | chr7 | 150600746 | 150610550 | 0.0204978 | chr7:150602 | 0.0204978 |
| SEMA6C | 161 | chr1 | 149383256 | 149385668 | 0.0205758 | chr1:149385 | 0.0205758 |
| C3orf27 | 162 | chr3 | 129773495 | 129780700 | 0.0205868 | chr3:129774 | 0.0205868 |
| GNAT1 | 163 | chr3 | 50201594 | 50206661 | 0.0206436 | chr3:050205 | 0.0206436 |
| CCDC3 | 164 | chr10 | 13081542 | 13085932 | 0.0206554 | chr10:01308 | 0.0206554 |
| EPAS1 | 166 | chr2 | 46372862 | 46381049 | 0.0207434 | chr2:046379 | 0.0207434 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DFNB31 | 167 | chr9 | 116304454 | 116312989 | 0.020765 | chr9:116306 | 0.020765 |
| KLHDC7A | 168 | chr1 | 18675491 | 18683133 | 0.0207761 | chr1:01868 | 0.0207761 |
| MYC | 170 | chr8 | 128811461 | 128820364 | 0.0207918 | chr8:12881 | 0.0207918 |
| MRPL55 | 171 | chr1 | 226361011 | 226364765 | 0.0208378 | chr1:22636 | 0.0208378 |
| RGS20 | 172 | chr8 | 54926922 | 54958216 | 0.0208451 | chr8:05495 | 0.0208451 |
| NUDT18 | 173 | chr8 | 22020419 | 22027575 | 0.0208685 | chr8:02202 | 0.0208685 |
| CYP2W1 | 174 | chr7 | 989356 | 991942 | 0.0208746 | chr7:00099 | 0.0208746 |
| CCNT2 | 175 | chr2 | 135391343 | 135395305 | 0.0209259 | chr2:13539 | 0.0209259 |
| RNF44 | 177 | chr5 | 175894644 | 175898921 | 0.0210161 | chr5:17589 | 0.0210161 |
| NR6A1 | 179 | chr9 | 126496054 | 126573256 | 0.0210496 | chr9:12657 | 0.0210496 |
| KLHL7 | 180 | chr7 | 23106505 | 23114267 | 0.0210727 | chr7:02311 | 0.0210727 |
| KIFC2 | 181 | chr8 | 145662610 | 145670251 | 0.021073 | chr8:14566 | 0.021073 |
| RNF122 | 185 | chr8 | 33542054 | 33549671 | 0.0211277 | chr8:03354 | 0.0211277 |
| FPGS | 186 | chr9 | 129601534 | 129606976 | 0.0211435 | chr9:12960 | 0.0211435 |
| NCKIPSD | 187 | chr3 | 48695818 | 48700393 | 0.0211486 | chr3:04869 | 0.0211486 |
| LAMC3 | 190 | chr9 | 132872083 | 132958264 | 0.0212007 | chr9:13295 | 0.0212007 |
| PCYOX1 | 192 | chr2 | 70338880 | 70341307 | 0.0212105 | chr2:07033 | 0.0212105 |
| HIST1H2AM | 194 | chr6 | 27968817 | 27968861 | 0.0212893 | chr6:02796 | 0.0212893 |
| C9orf5 | 196 | chr9 | 110845979 | 110927428 | 0.0213179 | chr9:11092 | 0.0213179 |
| AFAP | 198 | chr4 | 7824501 | 7992917 | 0.0213464 | chr4:00782 | 0.0213464 |
| FLJ20628 | 201 | chr2 | 28944502 | 28952019 | 0.0214135 | chr2:02894 | 0.0214135 |
| NMNAT1 | 202 | chr1 | 9926062 | 9930922 | 0.0214294 | chr1:00992 | 0.0214294 |
| PPM1K | 203 | chr4 | 89422310 | 89429794 | 0.021446 | chr4:08942 | 0.021446 |
| MAF1 | 204 | chr8 | 145231554 | 145234179 | 0.0214649 | chr8:14523 | 0.0214649 |
| PCDHGA12 | 205 | chr5 | 140784943 | 140792948 | 0.0215437 | chr5:14079 | 0.0215437 |
| CCNL1 | 206 | chr3 | 158358257 | 158366661 | 0.0215843 | chr3:15836 | 0.0215843 |
| ING3 | 207 | chr7 | 120372664 | 120380597 | 0.0215899 | chr7:12037 | 0.0215899 |
| C9orf140 | 208 | chr9 | 139082251 | 139084712 | 0.0216341 | chr9:13908 | 0.0216341 |
| DUSP1 | 210 | chr5 | 172128297 | 172135285 | 0.0216537 | chr5:17213 | 0.0216537 |
| MGC61598 | 211 | chr9 | 139313775 | 139321068 | 0.0216581 | chr9:13931 | 0.0216581 |
| C9orf21 | 212 | chr9 | 98455851 | 98460441 | 0.0216703 | chr9:09845 | 0.0216703 |
| FLJ20254 | 214 | chr2 | 27103922 | 27111730 | 0.0217008 | chr2:02710 | 0.0217008 |
| SNAP91 | 216 | chr6 | 84473271 | 84481210 | 0.0217025 | chr6:08447 | 0.0217025 |
| ELOVL6 | 217 | chr4 | 111336704 | 111342563 | 0.0217143 | chr4:11133 | 0.0217143 |
| TSEN2 | 219 | chr3 | 12496148 | 12502998 | 0.0217536 | chr3:01250 | 0.0217536 |
| LRDD | 222 | chr11 | 789157 | 795140 | 0.0217733 | chr11:0007 | 0.0217733 |
| EFNA1 | 224 | chr1 | 153361564 | 153373952 | 0.0217827 | chr1:15337 | 0.0217827 |
| C9orf64 | 225 | chr9 | 85758935 | 85766892 | 0.0218121 | chr9:08576 | 0.0218121 |
| KIAA1984 | 226 | chr9 | 138807561 | 138822028 | 0.0218206 | chr9:13882 | 0.0218206 |
| GPRIN1 | 234 | chr5 | 175957322 | 175974921 | 0.0219533 | chr5:17595 | 0.0219533 |
| WBSCR18 | 237 | chr7 | 72730558 | 72735734 | 0.0219892 | chr7:07273 | 0.0219892 |
| SYT11 | 239 | chr1 | 154095984 | 154099139 | 0.02205 | chr1:15409 | 0.02205 |
| VHL | 242 | chr3 | 10154645 | 10160835 | 0.0220781 | chr3:01015 | 0.0220781 |
| FCRLB | 244 | chr1 | 159953750 | 159965055 | 0.0220989 | chr1:15996 | 0.0220989 |
| C6orf141 | 245 | chr6 | 49621534 | 49628970 | 0.0221377 | chr6:04962 | 0.0221377 |
| SLC26A4 | 247 | chr7 | 107083327 | 107090821 | 0.022182 | chr7:10708 | 0.022182 |
| TMEM129 | 248 | chr4 | 1687515 | 1692813 | 0.0221964 | chr4:00168 | 0.0221964 |
| POU4F3 | 249 | chr5 | 145693753 | 145701371 | 0.0222087 | chr5:14570 | 0.0222087 |
| TMEM38B | 250 | chr9 | 107491780 | 107498027 | 0.0222097 | chr9:10749 | 0.0222097 |
| DLX6 | 251 | chr7 | 96467953 | 96476063 | 0.0222361 | chr7:09647 | 0.0222361 |
| DFNA5 | 252 | chr7 | 24761941 | 24768630 | 0.0222576 | chr7:02476 | 0.0222576 |
| MGC29506 | 253 | chr5 | 138751325 | 138759126 | 0.0222629 | chr5:13875 | 0.0222629 |
| LRRC2 | 257 | chr3 | 46580484 | 46597590 | 0.0223208 | chr3:04658 | 0.0223208 |
| SATB2 | 258 | chr2 | 200026705 | 200033417 | 0.0223484 | chr2:20003 | 0.0223484 |
| PRO1853 | 259 | chr2 | 37312334 | 37316959 | 0.0223825 | chr2:03731 | 0.0223825 |
| CALM2 | 262 | chr2 | 47240782 | 47262569 | 0.0224172 | chr2:04725 | 0.0224172 |
| TRIM4 | 263 | chr7 | 99352921 | 99358585 | 0.0224773 | chr7:09935 | 0.0224773 |
| CHST2 | 264 | chr3 | 144315602 | 144324851 | 0.0224895 | chr3:14432 | 0.0224895 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| C1orf108 | 265 | chr1 | 39224294 | 39231464 | 0.0225134 | chr1:03923( | 0.0225134 |
| KLHL21 | 268 | chr1 | 6583158 | 6586251 | 0.0225433 | chr1:00658- | 0.0225433 |
| SKI | 270 | chr1 | 2145604 | 2152576 | 0.0225648 | chr1:00215( | 0.0225648 |
| BAT5 | 273 | chr6 | 31762731 | 31779012 | 0.0225769 | chr6:031763 | 0.0225769 |
| CCDC36 | 275 | chr3 | 49211411 | 49274253 | 0.0226413 | chr3:049211 | 0.0226413 |
| DERL1 | 278 | chr8 | 124121099 | 124128962 | 0.0226643 | chr8:124123 | 0.0226643 |
| KLF15 | 279 | chr3 | 127556918 | 127564285 | 0.0226712 | chr3:12755( | 0.0226712 |
| ROCK2 | 284 | chr2 | 11400010 | 11407540 | 0.0227954 | chr2:011401 | 0.0227954 |
| KCTD8 | 286 | chr4 | 44143017 | 44151017 | 0.022827 | chr4:044145 | 0.022827 |
| C6orf145 | 287 | chr6 | 3694369 | 3701955 | 0.0228423 | chr6:003695 | 0.0228423 |
| CD8A | 288 | chr2 | 86869131 | 86876650 | 0.0228537 | chr2:08686( | 0.0228537 |
| ASTN2 | 289 | chr9 | 118487790 | 119222452 | 0.0228633 | chr9:11848( | 0.0228633 |
| CLCNKA | 293 | chr1 | 16221221 | 16224187 | 0.0229211 | chr1:01622- | 0.0229211 |
| DDX56 | 294 | chr7 | 44577544 | 44585139 | 0.0229232 | chr7:04458( | 0.0229232 |
| RXRA | 298 | chr9 | 136427846 | 136472197 | 0.0229654 | chr9:13646( | 0.0229654 |
| GTPBP8 | 299 | chr3 | 114187128 | 114194904 | 0.0229947 | chr3:114192 | 0.0229947 |
| DES | 303 | chr2 | 219988427 | 219993901 | 0.0230737 | chr2:219992 | 0.0230737 |
| FAM129B | 304 | chr9 | 129368569 | 129376689 | 0.0230782 | chr9:12937( | 0.0230782 |
| CSPP1 | 305 | chr8 | 68139215 | 68161073 | 0.0231196 | chr8:06813( | 0.0231196 |
| REEP1 | 311 | chr2 | 86415979 | 86421116 | 0.0232211 | chr2:086417 | 0.0232211 |
| MICALL2 | 314 | chr7 | 1462999 | 1471112 | 0.0232322 | chr7:001463 | 0.0232322 |
| PPP2CA | 316 | chr5 | 133587189 | 133594486 | 0.0232546 | chr5:13358( | 0.0232546 |
| ZNF33B | 318 | chr10 | 42451788 | 42457700 | 0.0232919 | chr10:04245 | 0.0232919 |
| CEBPB | 319 | chr20 | 48236320 | 48243320 | 0.0232983 | chr20:04824 | 0.0232983 |
| ITGA8 | 320 | chr10 | 15799267 | 15807149 | 0.0233032 | chr10:0158( | 0.0233032 |
| HAAO | 324 | chr2 | 42847750 | 42878226 | 0.0233359 | chr2:042849 | 0.0233359 |
| WDR35 | 330 | chr2 | 20051232 | 20055273 | 0.0234024 | chr2:020053 | 0.0234024 |
| CPLX2 | 332 | chr5 | 175152900 | 175240757 | 0.023423 | chr5:17523- | 0.023423 |
| FZD5 | 333 | chr2 | 208339853 | 208347542 | 0.0234288 | chr2:20834- | 0.0234288 |
| SEMA6A | 334 | chr5 | 115935577 | 115941809 | 0.0234366 | chr5:11593( | 0.0234366 |
| ALS2 | 335 | chr2 | 202351535 | 202359011 | 0.0234407 | chr2:20235( | 0.0234407 |
| ADCY3 | 337 | chr2 | 24993115 | 25001015 | 0.0234639 | chr2:024995 | 0.0234639 |
| EDD1 | 340 | chr8 | 103491323 | 103499001 | 0.0235123 | chr8:10349( | 0.0235123 |
| MGC99813 | 342 | chr2 | 220117219 | 220122227 | 0.0235321 | chr2:220117 | 0.0235321 |
| SFRP2 | 346 | chr4 | 154927132 | 154935208 | 0.0235925 | chr4:15492( | 0.0235925 |
| PCSK1 | 349 | chr5 | 95792144 | 95799069 | 0.02362 | chr5:095794 | 0.02362 |
| GADD45G | 350 | chr9 | 91404696 | 91412293 | 0.0236255 | chr9:091409 | 0.0236255 |
| IKZF1 | 351 | chr7 | 50313463 | 50414174 | 0.0236489 | chr7:050315 | 0.0236489 |
| CENTA1 | 352 | chr7 | 958341 | 965391 | 0.0236514 | chr7:000958 | 0.0236514 |
| CXCL12 | 357 | chr10 | 44198156 | 44205133 | 0.0236789 | chr10:0441( | 0.0236789 |
| RGL2 | 359 | chr6 | 33367074 | 33375318 | 0.0237088 | chr6:03337- | 0.0237088 |
| SIAHBP1 | 368 | chr8 | 144970607 | 144987583 | 0.0238339 | chr8:14497( | 0.0238339 |
| RBM15B | 369 | chr3 | 51401904 | 51407697 | 0.0238415 | chr3:05140- | 0.0238415 |
| PROM2 | 371 | chr2 | 95298454 | 95306489 | 0.0238575 | chr2:09530- | 0.0238575 |
| KLHDC8A | 376 | chr1 | 203577060 | 203585296 | 0.0238926 | chr1:20357( | 0.0238926 |
| QSCN6L1 | 377 | chr9 | 138237985 | 138263688 | 0.0238941 | chr9:13824- | 0.0238941 |
| TXNDC6 | 379 | chr3 | 139523933 | 139536201 | 0.0238992 | chr3:13953- | 0.0238992 |
| HSPA4L | 383 | chr4 | 128917977 | 128925585 | 0.0239159 | chr4:12892( | 0.0239159 |
| IGSF4B | 384 | chr1 | 157402830 | 157438403 | 0.0239162 | chr1:15740( | 0.0239162 |
| RABGAP1 | 385 | chr9 | 124743174 | 124916451 | 0.0239166 | chr9:12474( | 0.0239166 |
| SASS6 | 386 | chr1 | 100366110 | 100371058 | 0.023926 | chr1:10037- | 0.023926 |
| ZFP41 | 389 | chr8 | 144397086 | 144416272 | 0.0239392 | chr8:14440- | 0.0239392 |
| PRR7 | 391 | chr5 | 176802578 | 176816033 | 0.023941 | chr5:17681- | 0.023941 |
| COL9A2 | 392 | chr1 | 40553121 | 40560170 | 0.0239411 | chr1:04055( | 0.0239411 |
| KIAA1706 | 396 | chr7 | 36153842 | 36161858 | 0.0240531 | chr7:03616( | 0.0240531 |
| NRXN1 | 397 | chr2 | 50425209 | 50433854 | 0.024063 | chr2:05042( | 0.024063 |
| KRTCAP3 | 401 | chr2 | 27518973 | 27521017 | 0.024123 | chr2:02751( | 0.024123 |
| WRNIP1 | 402 | chr6 | 2706237 | 2713292 | 0.0241328 | chr6:00271( | 0.0241328 |

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|---|---|---|---|---|---|---|---|
| MGC42105 | 405 | chr5 | 43226448 | 43230537 | 0.0241686 | chr5:04322 | 0.0241686 |
| HCFC1 | 406 | chrX | 152866280 | 152889747 | 0.0242292 | chrX:15288 | 0.0242292 |
| PURA | 407 | chr5 | 139468549 | 139476446 | 0.0242471 | chr5:13947 | 0.0242471 |
| COBRA1 | 408 | chr9 | 139267849 | 139287823 | 0.0242565 | chr9:13927 | 0.0242565 |
| C14orf149 | 409 | chr14 | 59015708 | 59020835 | 0.0242781 | chr14:0590 | 0.0242781 |
| DCC1 | 410 | chr8 | 120915476 | 120942790 | 0.0243179 | chr8:12093 | 0.0243179 |
| PRUNE | 412 | chr1 | 149247657 | 149274560 | 0.0243325 | chr1:14924 | 0.0243325 |
| ATP5C1 | 414 | chr10 | 7870229 | 7874250 | 0.0243924 | chr10:0078 | 0.0243924 |
| C1orf164 | 418 | chr1 | 44638331 | 44652817 | 0.0244548 | chr1:04464 | 0.0244548 |
| MAP1B | 419 | chr5 | 71434589 | 71441498 | 0.0244592 | chr5:07143 | 0.0244592 |
| BRD2 | 420 | chr6 | 33041356 | 33050892 | 0.0244652 | chr6:03304 | 0.0244652 |
| ATG9A | 423 | chr2 | 219792332 | 219802443 | 0.0244732 | chr2:21980 | 0.0244732 |
| AHCYL1 | 424 | chr1 | 110323366 | 110331682 | 0.024475 | chr1:11032 | 0.024475 |
| EIF3S4 | 425 | chr19 | 10089061 | 10094469 | 0.0244805 | chr19:0100 | 0.0244805 |
| C10orf108 | 428 | chr10 | 680585 | 688515 | 0.024491 | chr10:0006 | 0.024491 |
| TTC32 | 430 | chr2 | 19962796 | 19970669 | 0.0244937 | chr2:01996 | 0.0244937 |
| SH3RF1 | 435 | chr4 | 170426286 | 170434122 | 0.024559 | chr4:17042 | 0.024559 |
| IER5 | 437 | chr1 | 179318804 | 179327086 | 0.0245757 | chr1:17932 | 0.0245757 |
| S100A5 | 440 | chr1 | 151776396 | 151782743 | 0.0246109 | chr1:15178 | 0.0246109 |
| NBL1 | 441 | chr1 | 19836868 | 19845880 | 0.0246159 | chr1:01984 | 0.0246159 |
| PREI3 | 444 | chr2 | 198083816 | 198090760 | 0.0246742 | chr2:19808 | 0.0246742 |
| NEFL | 445 | chr8 | 24867089 | 24875491 | 0.0246974 | chr8:02486 | 0.0246974 |
| TXNL1 | 446 | chr18 | 52454546 | 52458664 | 0.0246985 | chr18:0524 | 0.0246985 |
| PPP1R12B | 447 | chr1 | 200584533 | 200709957 | 0.0247023 | chr1:20058 | 0.0247023 |
| NTRK1 | 451 | chr1 | 155050802 | 155100809 | 0.0247272 | chr1:15509 | 0.0247272 |
| TMEM33 | 453 | chr4 | 41626549 | 41634684 | 0.02478 | chr4:04163 | 0.02478 |
| LOC130576 | 454 | chr2 | 149597744 | 149606003 | 0.0247818 | chr2:14960 | 0.0247818 |
| STOX2 | 455 | chr4 | 185058796 | 185066003 | 0.024805 | chr4:18506 | 0.024805 |
| C1orf187 | 456 | chr1 | 11673813 | 11690771 | 0.0248166 | chr1:01167 | 0.0248166 |
| HLXB9 | 464 | chr7 | 156493554 | 156501425 | 0.024923 | chr7:15649 | 0.024923 |
| PLXND1 | 465 | chr3 | 130806424 | 130813730 | 0.0249259 | chr3:13080 | 0.0249259 |
| HAT1 | 466 | chr2 | 172483092 | 172489677 | 0.0249295 | chr2:17248 | 0.0249295 |
| GLRX2 | 468 | chr1 | 191339535 | 191346060 | 0.024937 | chr1:19134 | 0.024937 |
| WTAP | 470 | chr6 | 160063454 | 160071090 | 0.024958 | chr6:16006 | 0.024958 |
| ABCG5 | 471 | chr2 | 43914795 | 43919313 | 0.0249696 | chr2:04391 | 0.0249696 |
| RNF144 | 474 | chr2 | 6969581 | 6977530 | 0.0250104 | chr2:00697 | 0.0250104 |
| LARP1 | 475 | chr5 | 154070717 | 154117388 | 0.0250345 | chr5:15411 | 0.0250345 |
| IRX2 | 476 | chr5 | 2799976 | 2804479 | 0.0250458 | chr5:00280 | 0.0250458 |
| MSL2L1 | 480 | chr3 | 137394257 | 137399953 | 0.0250894 | chr3:13739 | 0.0250894 |
| ZBTB2 | 484 | chr6 | 151752230 | 151759706 | 0.0251141 | chr6:15175 | 0.0251141 |
| RAP2B | 485 | chr3 | 154357322 | 154365697 | 0.0251423 | chr3:15436 | 0.0251423 |
| CUL1 | 486 | chr7 | 148021374 | 148029332 | 0.0251578 | chr7:14802 | 0.0251578 |
| PPP2R5E | 488 | chr14 | 63077427 | 63084809 | 0.0251822 | chr14:0630 | 0.0251822 |
| SMOC2 | 490 | chr6 | 168581419 | 168587250 | 0.025246 | chr6:16858 | 0.025246 |
| CMYA5 | 492 | chr5 | 79017916 | 79023242 | 0.0252511 | chr5:07902 | 0.0252511 |
| C4orf16 | 494 | chr4 | 113367001 | 113375193 | 0.0252904 | chr4:11337 | 0.0252904 |
| RER1 | 499 | chr1 | 2313219 | 2318528 | 0.0253105 | chr1:00231 | 0.0253105 |
| EVC2 | 500 | chr4 | 5758829 | 5761180 | 0.0253422 | chr4:00576 | 0.0253422 |
| NR2F1 | 506 | chr5 | 92939498 | 92948907 | 0.0254076 | chr5:09294 | 0.0254076 |
| CELSR3 | 507 | chr3 | 48648998 | 48678219 | 0.0254146 | chr3:04865 | 0.0254146 |
| DNAI1 | 508 | chr9 | 34448804 | 34510979 | 0.02543 | chr9:03444 | 0.02543 |
| TUBA1 | 509 | chr2 | 219822654 | 219831871 | 0.0254412 | chr2:21982 | 0.0254412 |
| P2RY1 | 512 | chr3 | 154030063 | 154038633 | 0.0254573 | chr3:15403 | 0.0254573 |
| CDS1 | 514 | chr4 | 85718170 | 85726029 | 0.0254722 | chr4:08572 | 0.0254722 |
| FOXF1 | 515 | chr16 | 85096215 | 85104105 | 0.0254749 | chr16:0851 | 0.0254749 |
| PTGDS | 517 | chr9 | 138983896 | 138996018 | 0.0254974 | chr9:13899 | 0.0254974 |
| WFS1 | 518 | chr4 | 6317006 | 6325018 | 0.0254996 | chr4:00632 | 0.0254996 |
| BTF3 | 519 | chr5 | 72824962 | 72832844 | 0.0255311 | chr5:07283 | 0.0255311 |

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|---|---|---|---|---|---|---|---|
| GNPDA2 | 524 | chr4 | 44416638 | 44428418 | 0.0256197 | chr4:04442 | 0.0256197 |
| ATP5G3 | 526 | chr2 | 175751998 | 175759569 | 0.0256529 | chr2:17575 | 0.0256529 |
| TLE1 | 527 | chr9 | 83490447 | 83498787 | 0.0256733 | chr9:08349 | 0.0256733 |
| GDAP1 | 531 | chr8 | 75419819 | 75427729 | 0.0257577 | chr8:07542 | 0.0257577 |
| MATN3 | 533 | chr2 | 20055336 | 20081145 | 0.0257655 | chr2:02007 | 0.0257655 |
| COL5A1 | 535 | chr9 | 136667959 | 136676278 | 0.0257919 | chr9:13667 | 0.0257919 |
| EIF4EBP1 | 537 | chr8 | 38002688 | 38009620 | 0.0258093 | chr8:03800 | 0.0258093 |
| PTGER3 | 538 | chr1 | 71283370 | 71291374 | 0.0258124 | chr1:07128 | 0.0258124 |
| L1TD1 | 539 | chr1 | 62428287 | 62434822 | 0.0258404 | chr1:06243 | 0.0258404 |
| ZNF533 | 540 | chr2 | 180432074 | 180439579 | 0.0258578 | chr2:18043 | 0.0258578 |
| MDGA1 | 543 | chr6 | 37771389 | 37779089 | 0.0258922 | chr6:03777 | 0.0258922 |
| SNTG1 | 544 | chr8 | 51464087 | 51471844 | 0.0259118 | chr8:05146 | 0.0259118 |
| XKR4 | 545 | chr8 | 56174239 | 56180550 | 0.0259123 | chr8:05617 | 0.0259123 |
| LGR6 | 549 | chr1 | 200424483 | 200452427 | 0.0259518 | chr1:20045 | 0.0259518 |
| FAM46A | 550 | chr6 | 82516592 | 82524613 | 0.0259721 | chr6:08251 | 0.0259721 |
| STAMBP | 552 | chr2 | 73904332 | 73914009 | 0.0259938 | chr2:07390 | 0.0259938 |
| SLC10A4 | 553 | chr4 | 48175144 | 48185843 | 0.0260024 | chr4:04818 | 0.0260024 |
| MAGI3 | 554 | chr1 | 113729592 | 113737670 | 0.0260067 | chr1:11373 | 0.0260067 |
| COPS6 | 555 | chr7 | 99524578 | 99527966 | 0.0260069 | chr7:09952 | 0.0260069 |
| JMJD1B | 557 | chr5 | 137713400 | 137800575 | 0.0260277 | chr5:13771 | 0.0260277 |
| EGR3 | 559 | chr8 | 22604000 | 22611757 | 0.0260311 | chr8:02260 | 0.0260311 |
| SLC28A3 | 563 | chr9 | 86142888 | 86150809 | 0.0260731 | chr9:08614 | 0.0260731 |
| ARSB | 564 | chr5 | 78314358 | 78323589 | 0.0260755 | chr5:07831 | 0.0260755 |
| MAB21L2 | 571 | chr4 | 151717260 | 151726148 | 0.0261414 | chr4:15172 | 0.0261414 |
| SYNPO | 572 | chr5 | 149995110 | 150016918 | 0.0261508 | chr5:15000 | 0.0261508 |
| RAB11FIP5 | 573 | chr2 | 73154034 | 73197756 | 0.0261523 | chr2:07319 | 0.0261523 |
| C2orf18 | 574 | chr2 | 26835315 | 26857456 | 0.0261561 | chr2:02684 | 0.0261561 |
| UCK1 | 575 | chr9 | 133394009 | 133400971 | 0.0261762 | chr9:13339 | 0.0261762 |
| IQCB1 | 576 | chr3 | 123034498 | 123036538 | 0.0261814 | chr3:12303 | 0.0261814 |
| UNC5C | 577 | chr4 | 96686574 | 96694864 | 0.0261983 | chr4:09668 | 0.0261983 |
| RWDD3 | 578 | chr1 | 95467234 | 95474778 | 0.0262003 | chr1:09547 | 0.0262003 |
| PABPN1 | 579 | chr14 | 22854241 | 22862609 | 0.0262023 | chr14:0228 | 0.0262023 |
| HOXA10 | 580 | chr7 | 27176821 | 27187227 | 0.0262049 | chr7:02718 | 0.0262049 |
| EFNA5 | 581 | chr5 | 107031788 | 107039672 | 0.0262191 | chr5:10703 | 0.0262191 |
| DMRT3 | 583 | chr9 | 961509 | 969455 | 0.0262577 | chr9:00096 | 0.0262577 |
| FOS | 587 | chr14 | 74809900 | 74817771 | 0.0262884 | chr14:0748 | 0.0262884 |
| VILL | 591 | chr3 | 38006967 | 38016030 | 0.0263086 | chr3:03801 | 0.0263086 |
| POLR2L | 593 | chr11 | 829337 | 832511 | 0.0263363 | chr11:0008 | 0.0263363 |
| IGFBPL1 | 595 | chr9 | 38411918 | 38419824 | 0.0263558 | chr9:03841 | 0.0263558 |
| PASK | 596 | chr2 | 241694236 | 241737569 | 0.02636 | chr2:24173 | 0.02636 |
| HOXD10 | 597 | chr2 | 176682759 | 176692918 | 0.0263657 | chr2:17669 | 0.0263657 |
| CRHR2 | 599 | chr7 | 30685951 | 30693876 | 0.0263729 | chr7:03068 | 0.0263729 |
| TOR1AIP1 | 601 | chr1 | 178118061 | 178123582 | 0.0263797 | chr1:17811 | 0.0263797 |
| LOX | 604 | chr5 | 121439152 | 121447318 | 0.026396 | chr5:12144 | 0.026396 |
| SMAD5 | 608 | chr5 | 135491667 | 135498861 | 0.0264328 | chr5:13549 | 0.0264328 |
| TSC22D2 | 609 | chr3 | 151603525 | 151612273 | 0.0264424 | chr3:15160 | 0.0264424 |
| HHIP | 611 | chr4 | 145782111 | 145789722 | 0.0264493 | chr4:14578 | 0.0264493 |
| BZW2 | 615 | chr7 | 16652297 | 16657327 | 0.0264895 | chr7:01665 | 0.0264895 |
| C1QC | 616 | chr1 | 22840125 | 22847209 | 0.026497 | chr1:02284 | 0.026497 |
| C22orf34 | 617 | chr22 | 48401814 | 48410085 | 0.0265046 | chr22:0484 | 0.0265046 |
| SLC26A1 | 618 | chr4 | 970801 | 982490 | 0.0265135 | chr4:00097 | 0.0265135 |
| RRAGA | 620 | chr9 | 19034335 | 19041071 | 0.0265264 | chr9:01904 | 0.0265264 |
| CTNNAL1 | 621 | chr9 | 110813321 | 110820744 | 0.0265336 | chr9:11081 | 0.0265336 |
| TTYH3 | 623 | chr7 | 2632736 | 2640605 | 0.0265415 | chr7:00264 | 0.0265415 |
| CLDN23 | 624 | chr8 | 8592699 | 8599829 | 0.0265651 | chr8:00859 | 0.0265651 |
| TRIM7 | 626 | chr5 | 180557288 | 180569570 | 0.0265887 | chr5:18055 | 0.0265887 |
| MTF2 | 630 | chr1 | 93314597 | 93320188 | 0.0266428 | chr1:09331 | 0.0266428 |
| NT5DC2 | 631 | chr3 | 52540114 | 52549618 | 0.0266606 | chr3:05254 | 0.0266606 |

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|---|---|---|---|---|---|---|---|
| PDLIM7 | 632 | chr5 | 176854750 | 176860853 | 0.0266629 | chr5:17685 | 0.0266629 |
| GOT2 | 634 | chr16 | 57323198 | 57330945 | 0.0266936 | chr16:0573 | 0.0266936 |
| ADAR | 636 | chr1 | 152844950 | 152871257 | 0.026701 | chr1:15286 | 0.026701 |
| C5orf30 | 638 | chr5 | 102616955 | 102624804 | 0.0267149 | chr5:10262 | 0.0267149 |
| ARHGAP12 | 643 | chr10 | 32235695 | 32263256 | 0.0267349 | chr10:0322 | 0.0267349 |
| C3orf19 | 645 | chr3 | 14662929 | 14689076 | 0.026759 | chr3:01466 | 0.026759 |
| PYCARD | 647 | chr16 | 31119653 | 31122161 | 0.0267875 | chr16:0311 | 0.0267875 |
| ACTA1 | 648 | chr1 | 227633344 | 227640707 | 0.0267895 | chr1:22763 | 0.0267895 |
| NPM2 | 650 | chr8 | 21936970 | 21940727 | 0.0267947 | chr8:02193 | 0.0267947 |
| CCDC108 | 652 | chr2 | 219575901 | 219619555 | 0.0268427 | chr2:21960 | 0.0268427 |
| PTPRU | 654 | chr1 | 29435758 | 29438117 | 0.0268511 | chr1:02943 | 0.0268511 |
| LHFPL2 | 655 | chr5 | 77839447 | 77847177 | 0.0268556 | chr5:07784 | 0.0268556 |
| KBTBD5 | 656 | chr3 | 42697383 | 42704505 | 0.026866 | chr3:04270 | 0.026866 |
| FAM57B | 659 | chr16 | 29939927 | 29955165 | 0.0268918 | chr16:0299 | 0.0268918 |
| FAM20C | 662 | chr7 | 282736 | 290749 | 0.0269044 | chr7:00028 | 0.0269044 |
| MASP2 | 664 | chr1 | 11027343 | 11035345 | 0.0269446 | chr1:01102 | 0.0269446 |
| PIP5K1B | 665 | chr9 | 70505078 | 70629466 | 0.0269772 | chr9:07051 | 0.0269772 |
| SERP1 | 666 | chr3 | 151741743 | 151747118 | 0.0269818 | chr3:15174 | 0.0269818 |
| ADAMTS3 | 667 | chr4 | 73651166 | 73658901 | 0.0269973 | chr4:07365 | 0.0269973 |
| OSMR | 668 | chr5 | 38876470 | 38884381 | 0.0270052 | chr5:03888 | 0.0270052 |
| QARS | 669 | chr3 | 49108343 | 49120992 | 0.027015 | chr3:04911 | 0.027015 |
| ERLIN2 | 670 | chr8 | 37708152 | 37734403 | 0.0270152 | chr8:03771 | 0.0270152 |
| PKN2 | 671 | chr1 | 88918283 | 88925344 | 0.0270371 | chr1:08892 | 0.0270371 |
| C1orf50 | 673 | chr1 | 43005557 | 43010617 | 0.0270488 | chr1:04300 | 0.0270488 |
| RASGEF1C | 676 | chr5 | 179493807 | 179574184 | 0.0270549 | chr5:17949 | 0.0270549 |
| PPP1R14C | 678 | chr6 | 150501199 | 150508462 | 0.0270759 | chr6:15050 | 0.0270759 |
| LOC401498 | 679 | chr9 | 32768244 | 32776475 | 0.0270833 | chr9:03277 | 0.0270833 |
| FGF22 | 681 | chr19 | 591001 | 593115 | 0.0270914 | chr19:0005 | 0.0270914 |
| ST8SIA4 | 682 | chr5 | 100264081 | 100270099 | 0.0271014 | chr5:10026 | 0.0271014 |
| NUDT1 | 683 | chr7 | 2248414 | 2253800 | 0.0271053 | chr7:00225 | 0.0271053 |
| C9orf23 | 684 | chr9 | 34599950 | 34603408 | 0.0271055 | chr9:03460 | 0.0271055 |
| ADCY8 | 685 | chr8 | 132121609 | 132129364 | 0.027125 | chr8:13212 | 0.027125 |
| PTCRA | 687 | chr6 | 42986803 | 43001459 | 0.0271336 | chr6:04300 | 0.0271336 |
| PPP1R15B | 690 | chr1 | 202644799 | 202652977 | 0.0271719 | chr1:20264 | 0.0271719 |
| MARS2 | 692 | chr2 | 198276760 | 198281758 | 0.0271893 | chr2:19827 | 0.0271893 |
| C1orf172 | 694 | chr1 | 27149086 | 27163345 | 0.0271983 | chr1:02715 | 0.0271983 |
| CALML6 | 698 | chr1 | 1830632 | 1838708 | 0.0272117 | chr1:00183 | 0.0272117 |
| SNRPG | 700 | chr2 | 70372255 | 70376551 | 0.0272211 | chr2:07037 | 0.0272211 |
| PRCC | 705 | chr1 | 155001000 | 155006672 | 0.0273266 | chr1:15500 | 0.0273266 |
| CTPS | 707 | chr1 | 41212722 | 41220451 | 0.0273417 | chr1:04121 | 0.0273417 |
| GNLY | 710 | chr2 | 85772871 | 85776962 | 0.027361 | chr2:08577 | 0.027361 |
| DOM3Z | 712 | chr6 | 32047644 | 32056309 | 0.0273796 | chr6:03204 | 0.0273796 |
| TBR1 | 714 | chr2 | 161976211 | 161983923 | 0.0273861 | chr2:16198 | 0.0273861 |
| KIAA0828 | 721 | chr7 | 128647033 | 128857293 | 0.0274637 | chr7:12865 | 0.0274637 |
| C6orf120 | 722 | chr6 | 169844184 | 169848286 | 0.027466 | chr6:16984 | 0.027466 |
| FAM82B | 724 | chr8 | 87587787 | 87590070 | 0.0274863 | chr8:08758 | 0.0274863 |
| DNAJC1 | 727 | chr10 | 22330266 | 22337854 | 0.0274958 | chr10:0223 | 0.0274958 |
| CAMK2D | 728 | chr4 | 114899264 | 114907634 | 0.0274983 | chr4:11490 | 0.0274983 |
| SOX4 | 729 | chr6 | 21696585 | 21705099 | 0.0274987 | chr6:02170 | 0.0274987 |
| ZNF167 | 730 | chr3 | 44567978 | 44599965 | 0.0275012 | chr3:04457 | 0.0275012 |
| GMCL1 | 733 | chr2 | 69907541 | 69911515 | 0.0275071 | chr2:06991 | 0.0275071 |
| TUBE1 | 734 | chr6 | 112513081 | 112515267 | 0.0275322 | chr6:11251 | 0.0275322 |
| MTSS1 | 736 | chr8 | 125806891 | 125815271 | 0.0275822 | chr8:12580 | 0.0275822 |
| GUCY1A3 | 746 | chr4 | 156801982 | 156810583 | 0.0276616 | chr4:15680 | 0.0276616 |
| OTX1 | 747 | chr2 | 63127146 | 63133878 | 0.0276635 | chr2:06313 | 0.0276635 |
| DMRT2 | 748 | chr9 | 1036242 | 1044080 | 0.0276877 | chr9:00104 | 0.0276877 |
| IER5L | 750 | chr9 | 130977841 | 130985665 | 0.0277181 | chr9:13098 | 0.0277181 |
| NISCH | 751 | chr3 | 52464745 | 52502142 | 0.0277425 | chr3:05246 | 0.0277425 |

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|---|---|---|---|---|---|---|---|
| MCFD2 | 752 | chr2 | 46994149 | 47001400 | 0.0277494 | chr2:04699 | 0.0277494 |
| MARCH8 | 753 | chr10 | 45348436 | 45414656 | 0.0277554 | chr10:0454 | 0.0277554 |
| ABLIM3 | 756 | chr5 | 148495981 | 148504306 | 0.0277786 | chr5:14850 | 0.0277786 |
| ADRA2B | 757 | chr2 | 96143232 | 96149472 | 0.0277929 | chr2:09614 | 0.0277929 |
| C10orf111 | 758 | chr10 | 15177737 | 15179200 | 0.0277968 | chr10:0151 | 0.0277968 |
| GRM6 | 759 | chr5 | 178352048 | 178360226 | 0.0278031 | chr5:17835 | 0.0278031 |
| ANKRA2 | 761 | chr5 | 72892749 | 72897124 | 0.0278293 | chr5:07289 | 0.0278293 |
| LOC391356 | 763 | chr2 | 24864748 | 24869678 | 0.0278644 | chr2:02486 | 0.0278644 |
| MYCN | 764 | chr2 | 15993824 | 16002062 | 0.0278815 | chr2:01599 | 0.0278815 |
| PPP2R3A | 765 | chr3 | 137165644 | 137227113 | 0.0278825 | chr3:13716 | 0.0278825 |
| ITPKA | 768 | chr15 | 39569081 | 39575824 | 0.0279262 | chr15:0395 | 0.0279262 |
| UBIAD1 | 769 | chr1 | 11255452 | 11256902 | 0.0279308 | chr1:01125 | 0.0279308 |
| RXRB | 770 | chr6 | 33269340 | 33276385 | 0.0279389 | chr6:03326 | 0.0279389 |
| FLJ46836 | 771 | chr9 | 131944072 | 131946938 | 0.0279427 | chr9:13194 | 0.0279427 |
| CRIP3 | 782 | chr6 | 43382292 | 43389966 | 0.0280167 | chr6:04338 | 0.0280167 |
| CD8B | 784 | chr2 | 86901400 | 86908676 | 0.0280219 | chr2:08690 | 0.0280219 |
| FZD7 | 787 | chr2 | 202602331 | 202610054 | 0.0280476 | chr2:20260 | 0.0280476 |
| C2orf32 | 792 | chr2 | 68397580 | 68405107 | 0.028118 | chr2:06839 | 0.028118 |
| PPM1M | 793 | chr3 | 52255241 | 52258568 | 0.0281289 | chr3:05225 | 0.0281289 |
| CAPN10 | 794 | chr2 | 241170109 | 241177441 | 0.0281355 | chr2:24117 | 0.0281355 |
| FGF20 | 804 | chr8 | 16901817 | 16907367 | 0.0281695 | chr8:01690 | 0.0281695 |
| CHAT | 806 | chr10 | 50482911 | 50496922 | 0.0281838 | chr10:0504 | 0.0281838 |
| VARS | 810 | chr6 | 31853332 | 31873175 | 0.0282181 | chr6:03185 | 0.0282181 |
| ZNF346 | 811 | chr5 | 176376858 | 176384564 | 0.0282271 | chr5:17638 | 0.0282271 |
| HLA-DOA | 815 | chr6 | 33082969 | 33090793 | 0.0282789 | chr6:03308 | 0.0282789 |
| SCLY | 819 | chr2 | 238630374 | 238672716 | 0.0283304 | chr2:23867 | 0.0283304 |
| C9orf50 | 820 | chr9 | 131421673 | 131422698 | 0.0283317 | chr9:13142 | 0.0283317 |
| INTS5 | 821 | chr11 | 62170882 | 62177445 | 0.0283361 | chr11:06217 | 0.0283361 |
| LTBP1 | 823 | chr2 | 33020797 | 33028402 | 0.0283411 | chr2:03302 | 0.0283411 |
| FAM3B | 825 | chr21 | 41606553 | 41651474 | 0.0283471 | chr21:0416 | 0.0283471 |
| LRRC24 | 831 | chr8 | 145718666 | 145725140 | 0.0283906 | chr8:14572 | 0.0283906 |
| TRHDE | 833 | chr12 | 70952932 | 70957869 | 0.0284046 | chr12:0709 | 0.0284046 |
| MLF1IP | 835 | chr4 | 185889845 | 185892600 | 0.0284125 | chr4:18589 | 0.0284125 |
| DPP7 | 840 | chr9 | 139126578 | 139131955 | 0.028458 | chr9:13912 | 0.028458 |
| CITED1 | 843 | chrX | 71441453 | 71449016 | 0.0284736 | chrX:07144 | 0.0284736 |
| RBM13 | 846 | chr8 | 33461523 | 33464400 | 0.0284925 | chr8:03346 | 0.0284925 |
| PCDH10 | 847 | chr4 | 134284601 | 134292323 | 0.0285156 | chr4:13429 | 0.0285156 |
| CRSP9 | 848 | chr5 | 156499993 | 156507034 | 0.0285206 | chr5:15650 | 0.0285206 |
| MYLIP | 851 | chr6 | 16231826 | 16239952 | 0.0285552 | chr6:01623 | 0.0285552 |
| GORASP1 | 852 | chr3 | 39119122 | 39124053 | 0.0285595 | chr3:03912 | 0.0285595 |
| TRIM72 | 855 | chr16 | 31132568 | 31134549 | 0.0286226 | chr16:0311 | 0.0286226 |
| NOL12 | 856 | chr22 | 36406940 | 36414664 | 0.0286243 | chr22:0364 | 0.0286243 |
| MGST2 | 857 | chr4 | 140801149 | 140808180 | 0.0286278 | chr4:14080 | 0.0286278 |
| TRIM26 | 859 | chr6 | 30286956 | 30293500 | 0.0286358 | chr6:03028 | 0.0286358 |
| ARHGAP24 | 862 | chr4 | 86610071 | 87073565 | 0.0286614 | chr4:08661 | 0.0286614 |
| CHRM2 | 863 | chr7 | 136198422 | 136352661 | 0.0286665 | chr7:13620 | 0.0286665 |
| MRS2L | 864 | chr6 | 24508106 | 24513653 | 0.0286684 | chr6:02451 | 0.0286684 |
| ZNHIT4 | 867 | chr2 | 74532670 | 74538595 | 0.0286967 | chr2:07453 | 0.0286967 |
| SRPK2 | 870 | chr7 | 104694001 | 104821280 | 0.0287267 | chr7:10481 | 0.0287267 |
| ZFP36L2 | 872 | chr2 | 43302507 | 43312707 | 0.0287356 | chr2:04330 | 0.0287356 |
| C9orf164 | 873 | chr9 | 91166274 | 91174453 | 0.0287409 | chr9:09116 | 0.0287409 |
| TRIB2 | 875 | chr2 | 12769335 | 12778297 | 0.0287539 | chr2:01277 | 0.0287539 |
| NEUROG1 | 876 | chr5 | 134897054 | 134905062 | 0.0287974 | chr5:13489 | 0.0287974 |
| USP19 | 878 | chr3 | 49121100 | 49133360 | 0.0288148 | chr3:04913 | 0.0288148 |
| SLC6A3 | 882 | chr5 | 1496190 | 1503790 | 0.0288416 | chr5:00149 | 0.0288416 |
| KCNJ10 | 889 | chr1 | 158304287 | 158307922 | 0.0289018 | chr1:15830 | 0.0289018 |
| ADC | 891 | chr1 | 33314163 | 33322750 | 0.0289185 | chr1:03331 | 0.0289185 |
| PTPN13 | 893 | chr4 | 87730552 | 87737316 | 0.028938 | chr4:08773 | 0.028938 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ACHE | 894 | chr7 | 100325676 | 100336893 | 0.0289466 | chr7:100328 | 0.0289466 |
| RECK | 901 | chr9 | 36021465 | 36029451 | 0.0289649 | chr9:036027 | 0.0289649 |
| FLJ35220 | 902 | chr17 | 76002476 | 76006307 | 0.0289663 | chr17:07600 | 0.0289663 |
| LYNX1 | 904 | chr8 | 143845794 | 143863108 | 0.0289748 | chr8:143854 | 0.0289748 |
| MALL | 909 | chr2 | 110229055 | 110236890 | 0.0290137 | chr2:110229 | 0.0290137 |
| SLC9A3R1 | 913 | chr17 | 70255251 | 70259085 | 0.029024 | chr17:07025 | 0.029024 |
| PRUNE2 | 914 | chr9 | 78708204 | 78716294 | 0.0290443 | chr9:078710 | 0.0290443 |
| ZNRD1 | 915 | chr6 | 30132263 | 30140553 | 0.0290445 | chr6:030137 | 0.0290445 |
| STX1A | 919 | chr7 | 72769670 | 72775321 | 0.0290837 | chr7:072770 | 0.0290837 |
| PAX8 | 922 | chr2 | 113750637 | 113758030 | 0.0291013 | chr2:113751 | 0.0291013 |
| GFI1 | 926 | chr1 | 92721931 | 92730518 | 0.0291083 | chr1:092723 | 0.0291083 |
| PDE10A | 929 | chr6 | 165907538 | 166001105 | 0.0291277 | chr6:165993 | 0.0291277 |
| INTS6 | 934 | chr13 | 50922329 | 50930566 | 0.0291753 | chr13:05092 | 0.0291753 |
| PAQR6 | 937 | chr1 | 154479800 | 154485645 | 0.0291896 | chr1:154482 | 0.0291896 |
| GAA | 938 | chr17 | 75684378 | 75692108 | 0.0291965 | chr17:07569 | 0.0291965 |
| C9orf165 | 940 | chr9 | 34511279 | 34516406 | 0.0292012 | chr9:034511 | 0.0292012 |
| ATP1B4 | 943 | chrX | 119375155 | 119382537 | 0.0292471 | chrX:119380 | 0.0292471 |
| DEF6 | 944 | chr6 | 35371784 | 35375742 | 0.0292858 | chr6:035375 | 0.0292858 |
| PIM1 | 948 | chr6 | 37242028 | 37248846 | 0.0293121 | chr6:037247 | 0.0293121 |
| MAD2L1 | 950 | chr4 | 121204822 | 121212119 | 0.0293571 | chr4:121207 | 0.0293571 |
| AJAP1 | 952 | chr1 | 4609689 | 4617856 | 0.0293688 | chr1:004616 | 0.0293688 |
| ZNF672 | 954 | chr1 | 247096846 | 247110531 | 0.0293794 | chr1:247099 | 0.0293794 |
| HNRPU | 957 | chr1 | 243091563 | 243099958 | 0.0294159 | chr1:243093 | 0.0294159 |
| BNIP3 | 961 | chr10 | 133642918 | 133649844 | 0.029464 | chr10:13364 | 0.029464 |
| STYXL1 | 963 | chr7 | 75463716 | 75515273 | 0.0295209 | chr7:075514 | 0.0295209 |
| RSPO1 | 964 | chr1 | 37870424 | 37877718 | 0.0295438 | chr1:037872 | 0.0295438 |
| MANBA | 967 | chr4 | 103899029 | 103904029 | 0.0295619 | chr4:103900 | 0.0295619 |
| ALMS1 | 968 | chr2 | 73461114 | 73467500 | 0.0295715 | chr2:073466 | 0.0295715 |
| SHE | 975 | chr1 | 152738178 | 152741009 | 0.0296241 | chr1:152740 | 0.0296241 |
| F11R | 979 | chr1 | 159255250 | 159275518 | 0.0296438 | chr1:159274 | 0.0296438 |
| C9orf150 | 980 | chr9 | 12759998 | 12768235 | 0.0296598 | chr9:012765 | 0.0296598 |
| TCP11 | 981 | chr6 | 35215115 | 35222582 | 0.0296616 | chr6:035216 | 0.0296616 |
| HYAL3 | 984 | chr3 | 50305311 | 50312025 | 0.0296711 | chr3:050305 | 0.0296711 |
| RPESP | 987 | chr8 | 74165699 | 74173317 | 0.0297102 | chr8:074167 | 0.0297102 |
| MZF1 | 992 | chr19 | 63765221 | 63776694 | 0.0297176 | chr19:06377 | 0.0297176 |
| GALR2 | 993 | chr17 | 71582629 | 71585117 | 0.0297271 | chr17:07158 | 0.0297271 |
| UHRF2 | 995 | chr9 | 6397808 | 6405876 | 0.0297341 | chr9:006404 | 0.0297341 |
| RD3 | 996 | chr1 | 209729968 | 209738380 | 0.0297404 | chr1:20973 | 0.0297404 |
| DFFB | 997 | chr1 | 3763777 | 3766314 | 0.0297462 | chr1:003765 | 0.0297462 |
| CACNA1S | 1000 | chr1 | 199345708 | 199353834 | 0.0297528 | chr1:199347 | 0.0297528 |
| TKTL1 | 1002 | chrX | 153177364 | 153178011 | 0.0297688 | chrX:15317 | 0.0297688 |
| PCSK5 | 1008 | chr9 | 77691415 | 77698323 | 0.0298003 | chr9:077696 | 0.0298003 |
| HHLA3 | 1009 | chr1 | 70593103 | 70598444 | 0.029814 | chr1:070593 | 0.029814 |
| WASF1 | 1017 | chr6 | 110602877 | 110607745 | 0.0298847 | chr6:110607 | 0.0298847 |
| USH1G | 1019 | chr17 | 70427056 | 70430954 | 0.0299087 | chr17:07043 | 0.0299087 |
| PSMD9 | 1021 | chr12 | 120805791 | 120840097 | 0.0299199 | chr12:1208 | 0.0299199 |
| SYNGAP1 | 1024 | chr6 | 33496407 | 33529454 | 0.0299535 | chr6:033496 | 0.0299535 |
| TMEM54 | 1025 | chr1 | 33138174 | 33145050 | 0.0299591 | chr1:033139 | 0.0299591 |
| NSMAF | 1030 | chr8 | 59732551 | 59738058 | 0.0300194 | chr8:059733 | 0.0300194 |
| PRRX2 | 1033 | chr9 | 131462992 | 131470404 | 0.0300647 | chr9:131469 | 0.0300647 |
| NPAS1 | 1034 | chr19 | 52210579 | 52218617 | 0.0300839 | chr19:0522 | 0.0300839 |
| KEAP1 | 1036 | chr19 | 10470241 | 10477429 | 0.0300963 | chr19:01047 | 0.0300963 |
| HELT | 1037 | chr4 | 186171689 | 186179995 | 0.0300964 | chr4:186177 | 0.0300964 |
| EXOC8 | 1040 | chr1 | 229534189 | 229540149 | 0.0301117 | chr1:229538 | 0.0301117 |
| LDOC1 | 1048 | chrX | 140096373 | 140104028 | 0.0301792 | chrX:140098 | 0.0301792 |
| FZD10 | 1050 | chr12 | 129207614 | 129215918 | 0.0302045 | chr12:1292 | 0.0302045 |
| C6orf122 | 1053 | chr6 | 169928766 | 169944517 | 0.0302218 | chr6:169932 | 0.0302218 |
| TCEA1 | 1055 | chr8 | 55095034 | 55099508 | 0.0302285 | chr8:055097 | 0.0302285 |

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|---|---|---|---|---|---|---|---|
| SORCS2 | 1058 | chr4 | 7239809 | 7247794 | 0.0302314 | chr4:00724 | 0.0302314 |
| BAPX1 | 1060 | chr4 | 13152931 | 13160184 | 0.0302637 | chr4:01315 | 0.0302637 |
| C1orf117 | 1063 | chr1 | 16270197 | 16278195 | 0.030273 | chr1:01627 | 0.030273 |
| FAM91A1 | 1064 | chr8 | 124844697 | 124862609 | 0.0302742 | chr8:12485 | 0.0302742 |
| EGLN3 | 1068 | chr14 | 33487325 | 33495445 | 0.0302921 | chr14:0334 | 0.0302921 |
| FBXL12 | 1069 | chr19 | 9788997 | 9790630 | 0.0302953 | chr19:0097 | 0.0302953 |
| ADAMTS13 | 1075 | chr9 | 135277055 | 135314238 | 0.0303214 | chr9:13531 | 0.0303214 |
| TJAP1 | 1078 | chr6 | 43548991 | 43556075 | 0.0303748 | chr6:04355 | 0.0303748 |
| KCNK2 | 1079 | chr1 | 213317890 | 213325874 | 0.0303779 | chr1:21332 | 0.0303779 |
| EPB41 | 1084 | chr1 | 29081055 | 29188806 | 0.0304048 | chr1:02911 | 0.0304048 |
| NPR3 | 1086 | chr5 | 32743032 | 32822994 | 0.0304235 | chr5:03274 | 0.0304235 |
| LIMA1 | 1090 | chr12 | 48961155 | 48968652 | 0.0304455 | chr12:0489 | 0.0304455 |
| FHL2 | 1091 | chr2 | 105379649 | 105426859 | 0.0304558 | chr2:10538 | 0.0304558 |
| GANAB | 1092 | chr11 | 62149374 | 62170743 | 0.0304584 | chr11:06217 | 0.0304584 |
| BID | 1094 | chr22 | 16610501 | 16642651 | 0.030482 | chr22:0166 | 0.030482 |
| MAP3K7 | 1095 | chr6 | 91350799 | 91359082 | 0.0304883 | chr6:09135 | 0.0304883 |
| SLURP1 | 1096 | chr8 | 143818377 | 143828561 | 0.0304911 | chr8:14382 | 0.0304911 |
| TCF21 | 1098 | chr6 | 134246927 | 134254747 | 0.0304967 | chr6:13425 | 0.0304967 |
| GPR85 | 1099 | chr7 | 112512654 | 112520541 | 0.0304979 | chr7:11251 | 0.0304979 |
| L1CAM | 1100 | chrX | 152792001 | 152794370 | 0.0305035 | chrX:15279 | 0.0305035 |
| PDE6A | 1102 | chr5 | 149303910 | 149309219 | 0.0305212 | chr5:14930 | 0.0305212 |
| SEPW1 | 1103 | chr19 | 52968978 | 52976259 | 0.0305273 | chr19:0529 | 0.0305273 |
| PAX7 | 1105 | chr1 | 18824807 | 18833022 | 0.0305391 | chr1:01883 | 0.0305391 |
| ANAPC2 | 1109 | chr9 | 139189036 | 139202733 | 0.0305843 | chr9:13920 | 0.0305843 |
| PTK7 | 1110 | chr6 | 43150808 | 43154714 | 0.0305873 | chr6:04315 | 0.0305873 |
| FEV | 1112 | chr2 | 219555843 | 219563147 | 0.0306237 | chr2:21955 | 0.0306237 |
| UCHL1 | 1122 | chr4 | 40949654 | 40956242 | 0.0306907 | chr4:04095 | 0.0306907 |
| C6orf1 | 1124 | chr6 | 34322388 | 34326058 | 0.0307047 | chr6:03432 | 0.0307047 |
| NUP35 | 1125 | chr2 | 183692256 | 183699789 | 0.030711 | chr2:18369 | 0.030711 |
| INHBA | 1126 | chr7 | 41703984 | 41714534 | 0.0307161 | chr7:04170 | 0.0307161 |
| USP33 | 1137 | chr1 | 77982628 | 78003508 | 0.0308099 | chr1:07799 | 0.0308099 |
| HBXIP | 1141 | chr1 | 110750422 | 110757196 | 0.0308422 | chr1:11075 | 0.0308422 |
| DRB1 | 1142 | chr2 | 178685477 | 178687516 | 0.0308448 | chr2:17868 | 0.0308448 |
| ADHFE1 | 1146 | chr8 | 67505946 | 67509318 | 0.0308544 | chr8:06750 | 0.0308544 |
| MIF | 1148 | chr22 | 22561213 | 22569094 | 0.0308893 | chr22:0225 | 0.0308893 |
| SGPP2 | 1149 | chr2 | 222993203 | 223000055 | 0.0308898 | chr2:22299 | 0.0308898 |
| C6orf166 | 1150 | chr6 | 88465848 | 88474128 | 0.0308921 | chr6:08846 | 0.0308921 |
| CLEC14A | 1151 | chr14 | 37792591 | 37798100 | 0.0308953 | chr14:0377 | 0.0308953 |
| TMSB4Y | 1155 | chrY | 14319629 | 14327752 | 0.0309042 | chrY:01432 | 0.0309042 |
| RASAL2 | 1157 | chr1 | 176325311 | 176579828 | 0.0309073 | chr1:17633 | 0.0309073 |
| RFXANK | 1159 | chr19 | 19163998 | 19169429 | 0.030917 | chr19:0191 | 0.030917 |
| PCDH12 | 1163 | chr5 | 141315179 | 141318354 | 0.0309642 | chr5:14131 | 0.0309642 |
| MATN1 | 1165 | chr1 | 30966872 | 30974961 | 0.0309751 | chr1:03096 | 0.0309751 |
| CPNE7 | 1166 | chr16 | 88164454 | 88172332 | 0.0309871 | chr16:0881 | 0.0309871 |
| ERCC4 | 1167 | chr16 | 13916979 | 13923604 | 0.0310038 | chr16:0139 | 0.0310038 |
| LMNB2 | 1170 | chr19 | 2379136 | 2413401 | 0.0310236 | chr19:0024 | 0.0310236 |
| GABRB1 | 1171 | chr4 | 46723400 | 46730859 | 0.0310258 | chr4:04672 | 0.0310258 |
| ETNK2 | 1173 | chr1 | 202385101 | 202390517 | 0.0310328 | chr1:20238 | 0.0310328 |
| ZC3H12A | 1175 | chr1 | 37709510 | 37716102 | 0.0310649 | chr1:03771 | 0.0310649 |
| TOR3A | 1177 | chr1 | 177312520 | 177319982 | 0.0310716 | chr1:17731 | 0.0310716 |
| TWF2 | 1181 | chr3 | 52237659 | 52248179 | 0.0310837 | chr3:05223 | 0.0310837 |
| ANKRD34 | 1183 | chr1 | 144181884 | 144187023 | 0.0310871 | chr1:14418 | 0.0310871 |
| TPBG | 1184 | chr6 | 83125541 | 83132682 | 0.0310913 | chr6:08313 | 0.0310913 |
| EHHADH | 1189 | chr3 | 186452405 | 186454989 | 0.0311244 | chr3:18645 | 0.0311244 |
| RTCD1 | 1193 | chr1 | 100500513 | 100507001 | 0.031152 | chr1:10050 | 0.031152 |
| FAM50A | 1194 | chrX | 153324987 | 153328201 | 0.0311521 | chrX:15332 | 0.0311521 |
| MAPK15 | 1196 | chr8 | 144865010 | 144872955 | 0.0311674 | chr8:14487 | 0.0311674 |
| CD6 | 1199 | chr11 | 60490694 | 60498256 | 0.0311844 | chr11:0604 | 0.0311844 |

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|---|---|---|---|---|---|---|---|
| OBSCN | 1200 | chr1 | 226457255 | 226473382 | 0.0311844 | chr1:22646( | 0.0311844 |
| RNF12 | 1212 | chrX | 73748667 | 73756510 | 0.0312543 | chrX:07375( | 0.0312543 |
| CENPB | 1213 | chr20 | 3712505 | 3715106 | 0.0312571 | chr20:0037' | 0.0312571 |
| TLL1 | 1214 | chr4 | 167008518 | 167016934 | 0.0312573 | chr4:16701! | 0.0312573 |
| TRIP6 | 1215 | chr7 | 100302616 | 100308958 | 0.0312588 | chr7:10030: | 0.0312588 |
| PPP2R5A | 1217 | chr1 | 210520799 | 210528561 | 0.0312669 | chr1:21052! | 0.0312669 |
| FLJ32063 | 1219 | chr2 | 200042947 | 200045383 | 0.0312883 | chr2:20004- | 0.0312883 |
| IL11RA | 1220 | chr9 | 34640675 | 34651576 | 0.031292 | chr9:03465' | 0.031292 |
| DEFB1 | 1221 | chr8 | 6721818 | 6728071 | 0.0313039 | chr8:006722 | 0.0313039 |
| PRMT6 | 1222 | chr1 | 107395664 | 107403315 | 0.0313122 | chr1:10740' | 0.0313122 |
| EPHA3 | 1226 | chr3 | 89234101 | 89242034 | 0.0313295 | chr3:08923! | 0.0313295 |
| CAMK4 | 1230 | chr5 | 110584201 | 110590592 | 0.031356 | chr5:110588 | 0.031356 |
| MAP2K1IP1 | 1232 | chr4 | 101032268 | 101039455 | 0.0313642 | chr4:10103- | 0.0313642 |
| ABHD11 | 1233 | chr7 | 72788870 | 72796128 | 0.0313651 | chr7:07278! | 0.0313651 |
| CYB5D2 | 1236 | chr17 | 3993714 | 3995787 | 0.0313753 | chr17:0039! | 0.0313753 |
| PIAS1 | 1239 | chr15 | 66132793 | 66136101 | 0.03138 | chr15:06613 | 0.03138 |
| MGC26733 | 1243 | chr2 | 98064908 | 98230344 | 0.0313999 | chr2:09807( | 0.0313999 |
| LOC255374 | 1244 | chr7 | 99561061 | 99564115 | 0.0314061 | chr7:09956: | 0.0314061 |
| LRP8 | 1248 | chr1 | 53563829 | 53570676 | 0.0314555 | chr1:05356- | 0.0314555 |
| PKDREJ | 1249 | chr22 | 45030224 | 45037650 | 0.0314728 | chr22:0450: | 0.0314728 |
| SPON2 | 1252 | chr4 | 1153518 | 1161809 | 0.0314961 | chr4:00115! | 0.0314961 |
| SRFBP1 | 1254 | chr5 | 121322240 | 121327697 | 0.0315056 | chr5:12132! | 0.0315056 |
| CRABP2 | 1256 | chr1 | 154939464 | 154947415 | 0.0315294 | chr1:15494( | 0.0315294 |
| LAMB2 | 1257 | chr3 | 49133527 | 49150865 | 0.0315342 | chr3:04914! | 0.0315342 |
| ITGA2 | 1258 | chr5 | 52315565 | 52323510 | 0.0315465 | chr5:05232' | 0.0315465 |
| TBC1D10A | 1261 | chr22 | 29017972 | 29057956 | 0.0315654 | chr22:0290' | 0.0315654 |
| MAPK11 | 1262 | chr22 | 49044414 | 49056391 | 0.0315656 | chr22:0490- | 0.0315656 |
| TNNI1 | 1268 | chr1 | 199639818 | 199662597 | 0.0316015 | chr1:19965( | 0.0316015 |
| GNAS | 1269 | chr20 | 56842817 | 56902589 | 0.0316072 | chr20:0568- | 0.0316072 |
| SEMA6D | 1270 | chr15 | 45792625 | 45800484 | 0.0316081 | chr15:0457! | 0.0316081 |
| NFKBIL2 | 1271 | chr8 | 145625421 | 145646001 | 0.031613 | chr8:14563! | 0.031613 |
| RPS6KA1 | 1273 | chr1 | 26723744 | 26731199 | 0.0316269 | chr1:02673( | 0.0316269 |
| PDE6B | 1274 | chr4 | 604199 | 655011 | 0.0316281 | chr4:00060! | 0.0316281 |
| INTS10 | 1275 | chr8 | 19715290 | 19724352 | 0.0316422 | chr8:01971! | 0.0316422 |
| AHR | 1276 | chr7 | 17299454 | 17307812 | 0.0316479 | chr7:01730! | 0.0316479 |
| KLF11 | 1277 | chr2 | 10095634 | 10103757 | 0.0316534 | chr2:01010' | 0.0316534 |
| SIX2 | 1278 | chr2 | 45087362 | 45095509 | 0.0316553 | chr2:04508! | 0.0316553 |
| LOC346157 | 1282 | chr6 | 27463843 | 27466914 | 0.0316816 | chr6:02746- | 0.0316816 |
| TSCOT | 1283 | chr9 | 114690461 | 114698262 | 0.0316895 | chr9:11469: | 0.0316895 |
| LRRC14 | 1286 | chr8 | 145714192 | 145718490 | 0.0316996 | chr8:14571' | 0.0316996 |
| RREB1 | 1287 | chr6 | 7079314 | 7086958 | 0.0317014 | chr6:00708( | 0.0317014 |
| UBXD3 | 1288 | chr1 | 20379841 | 20387683 | 0.0317028 | chr1:02038! | 0.0317028 |
| PODN | 1289 | chr1 | 53295240 | 53302987 | 0.0317049 | chr1:05330' | 0.0317049 |
| DHCR24 | 1290 | chr1 | 55123415 | 55130946 | 0.0317071 | chr1:05512- | 0.0317071 |
| PDHB | 1291 | chr3 | 58392492 | 58396883 | 0.0317078 | chr3:05839- | 0.0317078 |
| 2'-PDE | 1293 | chr3 | 57516638 | 57518968 | 0.0317126 | chr3:05751' | 0.0317126 |
| LMO4 | 1295 | chr1 | 87561350 | 87572781 | 0.0317682 | chr1:08756' | 0.0317682 |
| MRM1 | 1300 | chr17 | 32031471 | 32033710 | 0.0318175 | chr17:0320: | 0.0318175 |
| AP3B1 | 1301 | chr5 | 77623959 | 77630923 | 0.0318358 | chr5:07762( | 0.0318358 |
| FLJ10357 | 1302 | chr14 | 20603336 | 20610754 | 0.0318393 | chr14:0206( | 0.0318393 |
| CCND1 | 1303 | chr11 | 69159563 | 69167767 | 0.0318404 | chr11:0691( | 0.0318404 |
| C4orf14 | 1305 | chr4 | 57534402 | 57538411 | 0.0318681 | chr4:05753( | 0.0318681 |
| DACH1 | 1307 | chr13 | 71336510 | 71344836 | 0.0318802 | chr13:0713: | 0.0318802 |
| MSX2 | 1310 | chr5 | 174079018 | 174086779 | 0.0318891 | chr5:17408- | 0.0318891 |
| IRAK1BP1 | 1312 | chr6 | 79628508 | 79636147 | 0.0319016 | chr6:07963- | 0.0319016 |
| MYO1G | 1313 | chr7 | 44982788 | 44990696 | 0.0319088 | chr7:04498- | 0.0319088 |
| NPAL2 | 1314 | chr8 | 99373041 | 99379633 | 0.0319183 | chr8:09937- | 0.0319183 |
| TMEM130 | 1315 | chr7 | 98302953 | 98305503 | 0.0319301 | chr7:09830: | 0.0319301 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| COPS8 | 1319 | chr2 | 237655252 | 237661693 | 0.0319422 | chr2:237658 | 0.0319422 |
| CSF3R | 1320 | chr1 | 36704333 | 36726539 | 0.0319495 | chr1:03672( | 0.0319495 |
| PELI2 | 1321 | chr14 | 55651541 | 55657576 | 0.0319814 | chr14:0556[ | 0.0319814 |
| GRB7 | 1323 | chr17 | 35147698 | 35150573 | 0.0320041 | chr17:0351- | 0.0320041 |
| P2RY4 | 1325 | chrX | 69393674 | 69396321 | 0.0320271 | chrX:06939[ | 0.0320271 |
| ST8SIA5 | 1331 | chr18 | 42588001 | 42596460 | 0.0320521 | chr18:0425[ | 0.0320521 |
| FBXO11 | 1333 | chr2 | 47984014 | 47991158 | 0.032054 | chr2:047985 | 0.032054 |
| LOC283951 | 1338 | chr16 | 1410040 | 1424845 | 0.0320858 | chr16:0014- | 0.0320858 |
| WDR40A | 1340 | chr9 | 34114115 | 34121989 | 0.0320891 | chr9:034116 | 0.0320891 |
| ZMPSTE24 | 1346 | chr1 | 40490866 | 40499009 | 0.0321209 | chr1:040496 | 0.0321209 |
| SREBF1 | 1350 | chr17 | 17678519 | 17686362 | 0.0321359 | chr17:01768 | 0.0321359 |
| ANK1 | 1353 | chr8 | 41639431 | 41777281 | 0.0321562 | chr8:04164- | 0.0321562 |
| EBNA1BP2 | 1354 | chr1 | 43405242 | 43410444 | 0.0321651 | chr1:04341( | 0.0321651 |
| TMIE | 1358 | chr3 | 46717838 | 46720114 | 0.032206 | chr3:046718 | 0.032206 |
| WDR51A | 1362 | chr3 | 52162397 | 52164128 | 0.0322134 | chr3:052163 | 0.0322134 |
| GTF3C1 | 1363 | chr16 | 27463593 | 27468724 | 0.0322191 | chr16:02746 | 0.0322191 |
| TNFRSF14 | 1365 | chr1 | 2484066 | 2491631 | 0.0322219 | chr1:002484 | 0.0322219 |
| INTS7 | 1370 | chr1 | 210270656 | 210275452 | 0.0323027 | chr1:21027[ | 0.0323027 |
| NPPA | 1374 | chr1 | 11828243 | 11839974 | 0.0323371 | chr1:01182[ | 0.0323371 |
| HYI | 1375 | chr1 | 43689524 | 43695443 | 0.0323383 | chr1:04369- | 0.0323383 |
| CCDC115 | 1378 | chr2 | 130811074 | 130816384 | 0.0323667 | chr2:130816 | 0.0323667 |
| RQCD1 | 1379 | chr2 | 219142005 | 219146715 | 0.0323719 | chr2:219142 | 0.0323719 |
| GFER | 1380 | chr16 | 1974165 | 1977754 | 0.0323807 | chr16:00197 | 0.0323807 |
| VEGFA | 1381 | chr6 | 43840597 | 43849432 | 0.0323832 | chr6:043848 | 0.0323832 |
| SLC35F5 | 1382 | chr2 | 114228533 | 114236388 | 0.0323849 | chr2:11423( | 0.0323849 |
| CDS2 | 1385 | chr20 | 5055574 | 5060689 | 0.0324129 | chr20:0050[ | 0.0324129 |
| BCOR | 1388 | chrX | 39839089 | 39847042 | 0.0324201 | chrX:03984- | 0.0324201 |
| C8orf40 | 1392 | chr8 | 42510559 | 42516242 | 0.0324534 | chr8:042516 | 0.0324534 |
| ORC2L | 1393 | chr2 | 201534679 | 201542106 | 0.0324544 | chr2:20153( | 0.0324544 |
| TCF2 | 1395 | chr17 | 33176481 | 33183343 | 0.0324625 | chr17:03317 | 0.0324625 |
| CDX2 | 1396 | chr13 | 27438763 | 27446718 | 0.0324647 | chr13:02743 | 0.0324647 |
| GFM1 | 1397 | chr3 | 159844749 | 159847484 | 0.0324776 | chr3:159845 | 0.0324776 |
| ANKRD13D | 1399 | chr11 | 66811001 | 66826474 | 0.032488 | chr11:06682 | 0.032488 |
| NEIL2 | 1400 | chr8 | 11658263 | 11666834 | 0.0324919 | chr8:011666 | 0.0324919 |
| CCDC66 | 1401 | chr3 | 56566031 | 56568745 | 0.0324951 | chr3:056566 | 0.0324951 |
| GNA14 | 1405 | chr9 | 79450209 | 79458327 | 0.0325272 | chr9:079452 | 0.0325272 |
| PEBP4 | 1407 | chr8 | 22839142 | 22845534 | 0.0325355 | chr8:02284- | 0.0325355 |
| CCDC41 | 1408 | chr12 | 93375330 | 93380282 | 0.032538 | chr12:09337 | 0.032538 |
| ENG | 1409 | chr9 | 129654079 | 129661532 | 0.0325394 | chr9:129656 | 0.0325394 |
| C10orf46 | 1410 | chr10 | 120502368 | 120508462 | 0.0325426 | chr10:1205( | 0.0325426 |
| TMEM14B | 1414 | chr6 | 10851423 | 10858412 | 0.0325666 | chr6:010856 | 0.0325666 |
| C6orf25 | 1417 | chr6 | 31793608 | 31801483 | 0.032592 | chr6:031799 | 0.032592 |
| NRM | 1427 | chr6 | 30764355 | 30769809 | 0.0326602 | chr6:03076- | 0.0326602 |
| PLA2G2A | 1432 | chr1 | 20177121 | 20180844 | 0.0326976 | chr1:020177 | 0.0326976 |
| EVX1 | 1434 | chr7 | 27243501 | 27251650 | 0.0327008 | chr7:027249 | 0.0327008 |
| ZNF684 | 1435 | chr1 | 40767703 | 40772060 | 0.0327111 | chr1:040769 | 0.0327111 |
| HMGB2 | 1437 | chr4 | 174489243 | 174497577 | 0.0327201 | chr4:17449- | 0.0327201 |
| KCNS2 | 1443 | chr8 | 99503204 | 99511883 | 0.0327682 | chr8:099509 | 0.0327682 |
| IRF2 | 1445 | chr4 | 185584902 | 185637941 | 0.0328243 | chr4:18563[ | 0.0328243 |
| C5orf35 | 1449 | chr5 | 56236803 | 56243424 | 0.0328436 | chr5:05624( | 0.0328436 |
| ITGAL | 1453 | chr16 | 30386685 | 30393632 | 0.0328589 | chr16:0303[ | 0.0328589 |
| MYL3 | 1454 | chr3 | 46877458 | 46883991 | 0.0328698 | chr3:046878 | 0.0328698 |
| FLJ20245 | 1457 | chr9 | 139288143 | 139295471 | 0.0328888 | chr9:139293 | 0.0328888 |
| APOB48R | 1458 | chr16 | 28413675 | 28416354 | 0.0328921 | chr16:0284- | 0.0328921 |
| TIGD5 | 1459 | chr8 | 144751559 | 144755074 | 0.0328963 | chr8:144753 | 0.0328963 |
| PCDHGC5 | 1460 | chr5 | 140847721 | 140851432 | 0.0329093 | chr5:14085- | 0.0329093 |
| FIP1L1 | 1464 | chr4 | 53937621 | 53940799 | 0.0329687 | chr4:053938 | 0.0329687 |
| RGS3 | 1465 | chr9 | 115259756 | 115399042 | 0.0329855 | chr9:115396 | 0.0329855 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SLC5A8 | 1466 | chr12 | 100125381 | 100131557 | 0.0329889 | chr12:1001 | 0.0329889 |
| MARCH4 | 1475 | chr2 | 216942477 | 216949579 | 0.0330498 | chr2:21694 | 0.0330498 |
| CHRD | 1476 | chr3 | 185581191 | 185584049 | 0.0330738 | chr3:18558 | 0.0330738 |
| VCPIP1 | 1480 | chr8 | 67736959 | 67741894 | 0.0330908 | chr8:06774 | 0.0330908 |
| ARMCX1 | 1485 | chrX | 100688175 | 100694752 | 0.0331203 | chrX:10069 | 0.0331203 |
| MRPS36 | 1494 | chr5 | 68544480 | 68561659 | 0.033205 | chr5:06854 | 0.033205 |
| SMG5 | 1496 | chr1 | 154485849 | 154519028 | 0.0332207 | chr1:15448 | 0.0332207 |
| C14orf4 | 1503 | chr14 | 76561504 | 76570139 | 0.033261 | chr14:0765 | 0.033261 |
| STK38 | 1505 | chr6 | 36620703 | 36627862 | 0.0332682 | chr6:03662 | 0.0332682 |
| IL1RL2 | 1507 | chr2 | 102164480 | 102172497 | 0.0332837 | chr2:10217 | 0.0332837 |
| JTB | 1508 | chr1 | 152213987 | 152220714 | 0.0332987 | chr1:15221 | 0.0332987 |
| KCNK17 | 1510 | chr6 | 39387884 | 39390483 | 0.0333199 | chr6:03938 | 0.0333199 |
| DGKE | 1511 | chr17 | 52261227 | 52268852 | 0.0333472 | chr17:0522 | 0.0333472 |
| SDC3 | 1514 | chr1 | 31120639 | 31159222 | 0.0333903 | chr1:03112 | 0.0333903 |
| GPC2 | 1516 | chr7 | 99605162 | 99612908 | 0.0334015 | chr7:09961 | 0.0334015 |
| SLC39A1 | 1517 | chr1 | 152198309 | 152206551 | 0.0334026 | chr1:15220 | 0.0334026 |
| CENTD3 | 1520 | chr5 | 141013143 | 141047189 | 0.0334206 | chr5:14101 | 0.0334206 |
| RNASEH2B | 1521 | chr13 | 50376724 | 50384343 | 0.0334228 | chr13:0503 | 0.0334228 |
| MAP6D1 | 1524 | chr3 | 185024507 | 185029533 | 0.0334476 | chr3:18502 | 0.0334476 |
| PITX2 | 1526 | chr4 | 111760752 | 111783483 | 0.0334675 | chr4:11176 | 0.0334675 |
| FSCN1 | 1529 | chr7 | 5594558 | 5601369 | 0.0334784 | chr7:00560 | 0.0334784 |
| UCHL5 | 1533 | chr1 | 191290477 | 191295026 | 0.0335179 | chr1:19129 | 0.0335179 |
| RHBDL1 | 1539 | chr16 | 664395 | 668276 | 0.0335421 | chr16:0006 | 0.0335421 |
| TSPAN12 | 1540 | chr7 | 120283117 | 120290922 | 0.0335517 | chr7:12028 | 0.0335517 |
| FCHSD1 | 1541 | chr5 | 141000944 | 141011717 | 0.0335572 | chr5:14101 | 0.0335572 |
| CCDC64 | 1543 | chr12 | 118908450 | 118914152 | 0.0335716 | chr12:1189 | 0.0335716 |
| HIPK1 | 1544 | chr1 | 114268268 | 114321915 | 0.0335741 | chr1:11427 | 0.0335741 |
| RASSF5 | 1545 | chr1 | 204747564 | 204799997 | 0.0335812 | chr1:20474 | 0.0335812 |
| TMEM168 | 1549 | chr7 | 112209687 | 112222165 | 0.0335913 | chr7:11221 | 0.0335913 |
| FLJ20152 | 1550 | chr5 | 16559799 | 16675545 | 0.0335985 | chr5:0166 | 0.0335985 |
| VAX1 | 1554 | chr10 | 118885157 | 118893254 | 0.0336289 | chr10:1188 | 0.0336289 |
| UBE2J2 | 1555 | chr1 | 1191252 | 1198986 | 0.0336342 | chr1:00119 | 0.0336342 |
| TMEM63B | 1562 | chr6 | 44203425 | 44231024 | 0.0336775 | chr6:04423 | 0.0336775 |
| INSRR | 1564 | chr1 | 155092773 | 155095139 | 0.0336852 | chr1:15509 | 0.0336852 |
| PPP2R3B | 1566 | chrY | 219151 | 273152 | 0.0336909 | chrY:00022 | 0.0336909 |
| RSPO2 | 1567 | chr8 | 109160982 | 109168013 | 0.0337203 | chr8:10916 | 0.0337203 |
| EREG | 1568 | chr4 | 75444369 | 75452339 | 0.033726 | chr4:07544 | 0.033726 |
| FBN2 | 1570 | chr5 | 127898728 | 127905739 | 0.0337367 | chr5:12790 | 0.0337367 |
| KCNN1 | 1571 | chr19 | 17940323 | 17947144 | 0.0337426 | chr19:0179 | 0.0337426 |
| C9orf117 | 1580 | chr9 | 129512793 | 129515591 | 0.0337935 | chr9:12951 | 0.0337935 |
| AVPR1B | 1583 | chr1 | 204386194 | 204393499 | 0.0338277 | chr1:20439 | 0.0338277 |
| NR2F2 | 1584 | chr15 | 94669738 | 94678775 | 0.0338348 | chr15:0946 | 0.0338348 |
| IMPDH1 | 1586 | chr7 | 127834860 | 127842789 | 0.0338414 | chr7:12783 | 0.0338414 |
| GPNMB | 1589 | chr7 | 23247463 | 23254917 | 0.0338499 | chr7:02325 | 0.0338499 |
| ADPRH | 1592 | chr3 | 120775688 | 120785771 | 0.0338589 | chr3:12078 | 0.0338589 |
| MAFK | 1594 | chr7 | 1533149 | 1547861 | 0.0338969 | chr7:00154 | 0.0338969 |
| SNAPC4 | 1595 | chr9 | 138389846 | 138415972 | 0.0339019 | chr9:13841 | 0.0339019 |
| PCDHGC3 | 1596 | chr5 | 140830243 | 140838368 | 0.0339068 | chr5:14083 | 0.0339068 |
| LMX1A | 1598 | chr1 | 163446786 | 163597644 | 0.0339154 | chr1:16359 | 0.0339154 |
| SETDB1 | 1601 | chr1 | 149161484 | 149167672 | 0.0339355 | chr1:14916 | 0.0339355 |
| PDLIM2 | 1602 | chr8 | 22489061 | 22511408 | 0.033942 | chr8:02251 | 0.033942 |
| SLC6A16 | 1603 | chr19 | 54519489 | 54520359 | 0.0339669 | chr19:0545 | 0.0339669 |
| HABP4 | 1604 | chr9 | 98246827 | 98254728 | 0.033968 | chr9:09825 | 0.033968 |
| SURF2 | 1605 | chr9 | 135213290 | 135217982 | 0.0339709 | chr9:13521 | 0.0339709 |
| SNED1 | 1607 | chr2 | 241650251 | 241654467 | 0.0339723 | chr2:24165 | 0.0339723 |
| ADAMTS15 | 1611 | chr11 | 129819035 | 129826572 | 0.0339923 | chr11:1298 | 0.0339923 |
| SNIP | 1616 | chr17 | 33966714 | 33974671 | 0.0340154 | chr17:0339 | 0.0340154 |
| APBB1IP | 1622 | chr10 | 26764121 | 26770196 | 0.0340301 | chr10:0267 | 0.0340301 |

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|---|---|---|---|---|---|---|---|
| DMRT1 | 1625 | chr9 | 827943 | 834363 | 0.0340315 | chr9:00083 | 0.0340315 |
| THAP10 | 1630 | chr15 | 68968984 | 68971827 | 0.0340541 | chr15:06897 | 0.0340541 |
| TRIB1 | 1633 | chr8 | 126506514 | 126514784 | 0.0340897 | chr8:12651 | 0.0340897 |
| TAS1R2 | 1635 | chr1 | 19056293 | 19063965 | 0.0341002 | chr1:019058 | 0.0341002 |
| RORB | 1637 | chr9 | 76296737 | 76305221 | 0.0341123 | chr9:07630 | 0.0341123 |
| ZBTB16 | 1638 | chr11 | 113430193 | 113636269 | 0.0341219 | chr11:11343 | 0.0341219 |
| CDKN1A | 1642 | chr6 | 36749657 | 36756881 | 0.0341656 | chr6:03675 | 0.0341656 |
| MYL5 | 1643 | chr4 | 661727 | 663613 | 0.0341674 | chr4:00066 | 0.0341674 |
| DUSP7 | 1644 | chr3 | 52062878 | 52070663 | 0.0341733 | chr3:05206 | 0.0341733 |
| CENPF | 1645 | chr1 | 212841560 | 212845239 | 0.0341771 | chr1:21284 | 0.0341771 |
| CHTF18 | 1651 | chr16 | 778685 | 787708 | 0.0342163 | chr16:0007 | 0.0342163 |
| ZNF498 | 1653 | chr7 | 99054916 | 99062092 | 0.0342289 | chr7:09905 | 0.0342289 |
| HEY2 | 1655 | chr6 | 126107200 | 126115022 | 0.0342412 | chr6:12611 | 0.0342412 |
| EMILIN1 | 1658 | chr2 | 27150472 | 27162794 | 0.0342526 | chr2:02716 | 0.0342526 |
| CDC42EP3 | 1661 | chr2 | 37749929 | 37758329 | 0.0342584 | chr2:03775 | 0.0342584 |
| GUK1 | 1662 | chr1 | 226394270 | 226403289 | 0.0342595 | chr1:22639 | 0.0342595 |
| DCUN1D4 | 1663 | chr4 | 52398675 | 52406521 | 0.0342653 | chr4:05240 | 0.0342653 |
| PPIG | 1664 | chr2 | 170148977 | 170151577 | 0.0342716 | chr2:17014 | 0.0342716 |
| COL23A1 | 1670 | chr5 | 177919768 | 177953368 | 0.0342866 | chr5:17794 | 0.0342866 |
| FLJ37078 | 1671 | chr7 | 75747054 | 75754926 | 0.03429 | chr7:07575 | 0.03429 |
| SUCLG2 | 1672 | chr3 | 67785184 | 67793192 | 0.0342957 | chr3:06778 | 0.0342957 |
| COMMD10 | 1673 | chr5 | 115443298 | 115451105 | 0.0342984 | chr5:11544 | 0.0342984 |
| SDCCAG3 | 1676 | chr9 | 138416253 | 138424611 | 0.0343133 | chr9:13841 | 0.0343133 |
| TP53I11 | 1679 | chr11 | 44926154 | 44934743 | 0.0343407 | chr11:04492 | 0.0343407 |
| SNAPC2 | 1681 | chr19 | 7885806 | 7894757 | 0.0343488 | chr19:0078 | 0.0343488 |
| ACBD3 | 1682 | chr1 | 224438653 | 224445541 | 0.0343537 | chr1:22444 | 0.0343537 |
| CCNI | 1684 | chr4 | 78213728 | 78221627 | 0.0343631 | chr4:07821 | 0.0343631 |
| MAEA | 1690 | chr4 | 1268236 | 1276243 | 0.0343763 | chr4:00127 | 0.0343763 |
| RAP1GAP | 1694 | chr1 | 21816638 | 21873857 | 0.0344113 | chr1:02181 | 0.0344113 |
| TAF7 | 1697 | chr5 | 140677700 | 140680548 | 0.0344324 | chr5:14068 | 0.0344324 |
| RRP9 | 1702 | chr3 | 51946278 | 51950942 | 0.0344723 | chr3:05195 | 0.0344723 |
| KIF3A | 1703 | chr5 | 132099138 | 132101154 | 0.0344819 | chr5:13210 | 0.0344819 |
| ZNF200 | 1705 | chr16 | 3222717 | 3229401 | 0.0344983 | chr16:0032 | 0.0344983 |
| PPP2R2A | 1708 | chr8 | 26199981 | 26207501 | 0.0345126 | chr8:02620 | 0.0345126 |
| ZIC5 | 1709 | chr13 | 99419550 | 99422290 | 0.0345312 | chr13:0994 | 0.0345312 |
| MMRN2 | 1712 | chr10 | 88703573 | 88707352 | 0.0345383 | chr10:0887 | 0.0345383 |
| KIAA0274 | 1718 | chr6 | 110119177 | 110121907 | 0.0345527 | chr6:11011 | 0.0345527 |
| SFTPC | 1720 | chr8 | 22075189 | 22077721 | 0.0345586 | chr8:02207 | 0.0345586 |
| GPX3 | 1721 | chr5 | 150376655 | 150382868 | 0.0345592 | chr5:15038 | 0.0345592 |
| DCAMKL2 | 1722 | chr4 | 151214094 | 151222212 | 0.0345594 | chr4:15121 | 0.0345594 |
| LUC7L | 1726 | chr16 | 217153 | 219449 | 0.0345785 | chr16:0002 | 0.0345785 |
| GEMIN6 | 1728 | chr2 | 38853471 | 38861974 | 0.0345906 | chr2:03885 | 0.0345906 |
| CHCHD1 | 1731 | chr10 | 75206967 | 75212996 | 0.0346323 | chr10:0752 | 0.0346323 |
| HOMER1 | 1733 | chr5 | 78842597 | 78850956 | 0.0346392 | chr5:07884 | 0.0346392 |
| CSTF1 | 1735 | chr20 | 54400956 | 54406144 | 0.0346463 | chr20:0544 | 0.0346463 |
| C9orf25 | 1737 | chr9 | 34388179 | 34448477 | 0.0346496 | chr9:03444 | 0.0346496 |
| DNMT3B | 1738 | chr20 | 30809090 | 30833074 | 0.0346644 | chr20:0308 | 0.0346644 |
| CAMK2B | 1741 | chr7 | 44329366 | 44336758 | 0.034684 | chr7:04433 | 0.034684 |
| PUSL1 | 1742 | chr1 | 1233924 | 1236872 | 0.034696 | chr1:00123 | 0.034696 |
| SEZ6L2 | 1743 | chr16 | 29814162 | 29818001 | 0.0347049 | chr16:0298 | 0.0347049 |
| SLC35B4 | 1751 | chr7 | 133650343 | 133657807 | 0.0347541 | chr7:13365 | 0.0347541 |
| SPAST | 1753 | chr2 | 32137156 | 32144385 | 0.0347643 | chr2:03214 | 0.0347643 |
| ADAMTSL4 | 1761 | chr1 | 148783122 | 148790577 | 0.0348091 | chr1:14878 | 0.0348091 |
| EDEM2 | 1765 | chr20 | 33196382 | 33203464 | 0.0348374 | chr20:0331 | 0.0348374 |
| OXSM | 1767 | chr3 | 25806672 | 25810040 | 0.0348492 | chr3:02580 | 0.0348492 |
| LYPLA2 | 1768 | chr1 | 23987279 | 23992776 | 0.0348669 | chr1:02399 | 0.0348669 |
| DEPDC1B | 1770 | chr5 | 60029355 | 60036365 | 0.0348753 | chr5:06003 | 0.0348753 |
| UBE1DC1 | 1771 | chr3 | 133862057 | 133864252 | 0.0348758 | chr3:13386 | 0.0348758 |

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|---|---|---|---|---|---|---|---|
| AXUD1 | 1773 | chr3 | 39167530 | 39175615 | 0.034901 | chr3:039169 | 0.034901 |
| MCTS1 | 1775 | chrX | 119620136 | 119624282 | 0.03492 | chrX:11962 | 0.03492 |
| NOL4 | 1778 | chr18 | 30054784 | 30061524 | 0.0349246 | chr18:03005 | 0.0349246 |
| P117 | 1782 | chr19 | 5626988 | 5631753 | 0.0349562 | chr19:00563 | 0.0349562 |
| PRDM16 | 1783 | chr1 | 2970209 | 2979633 | 0.034959 | chr1:002978 | 0.034959 |
| PCDHAC2 | 1786 | chr5 | 140320799 | 140329035 | 0.034978 | chr5:140327 | 0.034978 |
| C12orf41 | 1787 | chr12 | 47359313 | 47367663 | 0.0349785 | chr12:04736 | 0.0349785 |
| HS3ST6 | 1789 | chr16 | 1905933 | 1913904 | 0.0349942 | chr16:00190 | 0.0349942 |
| TGFBI | 1791 | chr5 | 135387248 | 135394938 | 0.0349962 | chr5:135394 | 0.0349962 |
| NOL7 | 1792 | chr6 | 13720935 | 13726061 | 0.0350163 | chr6:013723 | 0.0350163 |
| PLCXD3 | 1795 | chr5 | 41543982 | 41551612 | 0.0350359 | chr5:041546 | 0.0350359 |
| GAMT | 1797 | chr19 | 1350002 | 1352512 | 0.0350625 | chr19:00135 | 0.0350625 |
| SLC25A44 | 1798 | chr1 | 154428518 | 154449169 | 0.0350682 | chr1:154448 | 0.0350682 |
| NEU1 | 1801 | chr6 | 31936020 | 31938975 | 0.0350807 | chr6:031937 | 0.0350807 |
| RNF20 | 1804 | chr9 | 103330570 | 103338478 | 0.0350961 | chr9:103336 | 0.0350961 |
| DNAJC16 | 1806 | chr1 | 15725991 | 15728650 | 0.0351011 | chr1:015725 | 0.0351011 |
| RNF207 | 1807 | chr1 | 6188493 | 6190916 | 0.0351054 | chr1:006190 | 0.0351054 |
| EEF1D | 1810 | chr8 | 144733301 | 144750583 | 0.0351227 | chr8:144734 | 0.0351227 |
| ESPN | 1811 | chr1 | 6407512 | 6410346 | 0.0351235 | chr1:006409 | 0.0351235 |
| C9orf3 | 1813 | chr9 | 96524246 | 96890250 | 0.0351361 | chr9:096888 | 0.0351361 |
| PSME3 | 1815 | chr17 | 38239175 | 38249209 | 0.0351561 | chr17:03823 | 0.0351561 |
| PEX1 | 1817 | chr7 | 91991911 | 91995761 | 0.0351604 | chr7:091995 | 0.0351604 |
| MYBPC3 | 1819 | chr11 | 47328808 | 47334769 | 0.0351668 | chr11:04733 | 0.0351668 |
| KHDRBS3 | 1820 | chr8 | 136533614 | 136541780 | 0.0351684 | chr8:136539 | 0.0351684 |
| PPAPDC1B | 1821 | chr8 | 38243459 | 38251271 | 0.0351696 | chr8:038245 | 0.0351696 |
| TMBIM1 | 1822 | chr2 | 218863350 | 218870360 | 0.0351701 | chr2:21886 | 0.0351701 |
| TTC7A | 1823 | chr2 | 47016301 | 47024341 | 0.0351722 | chr2:047022 | 0.0351722 |
| SRP9 | 1829 | chr1 | 224026641 | 224034360 | 0.0352243 | chr1:224032 | 0.0352243 |
| DKFZp434K | 1835 | chr7 | 101892576 | 101897765 | 0.035247 | chr7:101892 | 0.035247 |
| SENP7 | 1836 | chr3 | 102712701 | 102719537 | 0.0352509 | chr3:10271 | 0.0352509 |
| MAPK13 | 1837 | chr6 | 36201409 | 36208822 | 0.0352644 | chr6:036207 | 0.0352644 |
| TMEM125 | 1838 | chr1 | 43504664 | 43511360 | 0.0352662 | chr1:043509 | 0.0352662 |
| DDX18 | 1840 | chr2 | 118284735 | 118291281 | 0.0352767 | chr2:118289 | 0.0352767 |
| LOC400258 | 1841 | chr14 | 104112433 | 104119684 | 0.0352788 | chr14:10411 | 0.0352788 |
| JMJD2C | 1844 | chr9 | 6742793 | 6749645 | 0.0352796 | chr9:006748 | 0.0352796 |
| STK32B | 1845 | chr4 | 5100353 | 5106317 | 0.0352812 | chr4:00510 | 0.0352812 |
| PROSC | 1853 | chr8 | 37734563 | 37741505 | 0.0353135 | chr8:037739 | 0.0353135 |
| GTF3C5 | 1855 | chr9 | 134891420 | 134923658 | 0.0353247 | chr9:134922 | 0.0353247 |
| CSF3 | 1856 | chr17 | 35420187 | 35427742 | 0.0353293 | chr17:03542 | 0.0353293 |
| ARHGAP21 | 1859 | chr10 | 25050228 | 25057733 | 0.0353486 | chr10:02505 | 0.0353486 |
| C10orf116 | 1866 | chr10 | 88713071 | 88720777 | 0.035393 | chr10:0887 | 0.035393 |
| HINT2 | 1871 | chr9 | 35802966 | 35807572 | 0.0354411 | chr9:03580 | 0.0354411 |
| LGR4 | 1872 | chr11 | 27344156 | 27454150 | 0.0354417 | chr11:02745 | 0.0354417 |
| HSPB6 | 1873 | chr19 | 40937294 | 40939608 | 0.035452 | chr19:04093 | 0.035452 |
| HOXC10 | 1875 | chr12 | 52659869 | 52670337 | 0.0354558 | chr12:05266 | 0.0354558 |
| SPR | 1879 | chr2 | 72964043 | 72970587 | 0.0354734 | chr2:072968 | 0.0354734 |
| PLEKHA4 | 1888 | chr19 | 54032215 | 54063092 | 0.0355273 | chr19:05403 | 0.0355273 |
| NAB2 | 1891 | chr12 | 55768852 | 55771806 | 0.0355374 | chr12:05576 | 0.0355374 |
| UBE1L | 1896 | chr3 | 49817531 | 49826766 | 0.0355686 | chr3:049817 | 0.0355686 |
| ACSL4 | 1897 | chrX | 108860853 | 108868658 | 0.0355689 | chrX:10886 | 0.0355689 |
| MLL4 | 1898 | chr19 | 40899935 | 40921815 | 0.0355721 | chr19:04090 | 0.0355721 |
| C4orf9 | 1900 | chr4 | 2909451 | 2934871 | 0.0355751 | chr4:00293 | 0.0355751 |
| LSR | 1903 | chr19 | 40430586 | 40450726 | 0.0355887 | chr19:04044 | 0.0355887 |
| U65 | 1905 | chr9 | 129250624 | 129253391 | 0.0355967 | chr9:12925( | 0.0355967 |
| WNT3A | 1907 | chr1 | 226256253 | 226263895 | 0.0356153 | chr1:22626 | 0.0356153 |
| PIP5KL1 | 1908 | chr9 | 129723792 | 129734016 | 0.0356234 | chr9:12972 | 0.0356234 |
| MGC2408 | 1911 | chr3 | 185450256 | 185455522 | 0.0356418 | chr3:18545( | 0.0356418 |
| CRY1 | 1912 | chr12 | 105909275 | 106016844 | 0.0356586 | chr12:1060 | 0.0356586 |

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|---|---|---|---|---|---|---|---|
| MTIF2 | 1914 | chr2 | 55317042 | 55349963 | 0.0356636 | chr2:05534 | 0.0356636 |
| TNFAIP8L1 | 1918 | chr19 | 4585654 | 4592869 | 0.0356783 | chr19:0045 | 0.0356783 |
| SMAD7 | 1921 | chr18 | 44728524 | 44736598 | 0.0356821 | chr18:0447 | 0.0356821 |
| AQP2 | 1926 | chr12 | 48625434 | 48638807 | 0.0357187 | chr12:0486 | 0.0357187 |
| LEMD2 | 1927 | chr6 | 33862450 | 33870143 | 0.0357206 | chr6:03386 | 0.0357206 |
| RNF130 | 1932 | chr5 | 179372715 | 179436732 | 0.035752 | chr5:17943 | 0.035752 |
| COMT | 1935 | chr22 | 18308237 | 18332577 | 0.0357926 | chr22:0183 | 0.0357926 |
| TSPAN15 | 1936 | chr10 | 70876411 | 70883773 | 0.0358137 | chr10:0708 | 0.0358137 |
| CTR9 | 1937 | chr11 | 10723954 | 10731893 | 0.0358147 | chr11:0107 | 0.0358147 |
| RNF5 | 1939 | chr6 | 32254440 | 32256642 | 0.0358287 | chr6:03225 | 0.0358287 |
| HMGN4 | 1941 | chr6 | 26641251 | 26649108 | 0.0358435 | chr6:02664 | 0.0358435 |
| LSP1 | 1942 | chr11 | 1825423 | 1833382 | 0.0358444 | chr11:0018 | 0.0358444 |
| HYAL1 | 1947 | chr3 | 50312298 | 50317365 | 0.0358792 | chr3:05031 | 0.0358792 |
| NELL1 | 1950 | chr11 | 20642793 | 20650336 | 0.0359187 | chr11:0206 | 0.0359187 |
| ZNF385 | 1951 | chr12 | 53049263 | 53074629 | 0.0359239 | chr12:0530 | 0.0359239 |
| FNTB | 1952 | chr14 | 64520334 | 64525304 | 0.03593 | chr14:0645 | 0.03593 |
| LRCH4 | 1957 | chr7 | 100016528 | 100021712 | 0.0359518 | chr7:10001 | 0.0359518 |
| C2orf40 | 1964 | chr2 | 106043060 | 106050328 | 0.0360107 | chr2:10604 | 0.0360107 |
| EXOC1 | 1965 | chr4 | 56409213 | 56416517 | 0.0360118 | chr4:0564 | 0.0360118 |
| DOCK11 | 1967 | chrX | 117510503 | 117516374 | 0.0360225 | chrX:11751 | 0.0360225 |
| ADAT1 | 1973 | chr16 | 74212197 | 74218136 | 0.0360695 | chr16:0742 | 0.0360695 |
| AGER | 1974 | chr6 | 32256696 | 32260482 | 0.0360703 | chr6:03225 | 0.0360703 |
| CTBP1 | 1977 | chr4 | 1228728 | 1232513 | 0.0360928 | chr4:00123 | 0.0360928 |
| SPOCK3 | 1980 | chr4 | 168389691 | 168397759 | 0.0360989 | chr4:16839 | 0.0360989 |
| ESAM | 1981 | chr11 | 124128232 | 124141530 | 0.0361002 | chr11:12413 | 0.0361002 |
| FAM127A | 1982 | chrX | 133993988 | 133996865 | 0.0361002 | chrX:13399 | 0.0361002 |
| RAB6B | 1984 | chr3 | 135094597 | 135101238 | 0.036111 | chr3:13509 | 0.036111 |
| CGN | 1988 | chr1 | 149745102 | 149777721 | 0.0361377 | chr1:14975 | 0.0361377 |
| TBL1Y | 1990 | chrY | 6836543 | 6954892 | 0.0361417 | chrY:00683 | 0.0361417 |
| MRPL53 | 1993 | chr2 | 74552668 | 74554318 | 0.0361609 | chr2:07455 | 0.0361609 |
| SCUBE1 | 1994 | chr22 | 42066853 | 42073756 | 0.036165 | chr22:0420 | 0.036165 |
| NT5E | 1998 | chr6 | 86211404 | 86219075 | 0.0361861 | chr6:08621 | 0.0361861 |
| RAB3GAP2 | 2000 | chr1 | 218511149 | 218517740 | 0.0361935 | chr1:21851 | 0.0361935 |
| IKBKG | 2001 | chrX | 153429303 | 153433712 | 0.036224 | chrX:15343 | 0.036224 |
| SH2B3 | 2002 | chr12 | 110323460 | 110330281 | 0.0362298 | chr12:1103 | 0.0362298 |
| SNN | 2003 | chr16 | 11664751 | 11679939 | 0.0362336 | chr16:0116 | 0.0362336 |
| TEKT2 | 2005 | chr1 | 36317379 | 36326478 | 0.0362538 | chr1:03632 | 0.0362538 |
| ARID3C | 2009 | chr9 | 34611610 | 34615782 | 0.0362648 | chr9:03461 | 0.0362648 |
| U2AF2 | 2012 | chr19 | 60856493 | 60877894 | 0.0362768 | chr19:0608 | 0.0362768 |
| OXCT1 | 2019 | chr5 | 41903743 | 41911527 | 0.0363208 | chr5:04190 | 0.0363208 |
| PLB1 | 2021 | chr2 | 28672937 | 28680789 | 0.0363412 | chr2:02868 | 0.0363412 |
| LOXL4 | 2022 | chr10 | 100015727 | 100023442 | 0.0363462 | chr10:1000 | 0.0363462 |
| FBP1 | 2023 | chr9 | 96439172 | 96446015 | 0.0363525 | chr9:09644 | 0.0363525 |
| HIST1H3A | 2026 | chr6 | 26128687 | 26128899 | 0.0363577 | chr6:02612 | 0.0363577 |
| C1orf57 | 2031 | chr1 | 231147987 | 231154362 | 0.0363893 | chr1:23115 | 0.0363893 |
| SCOTIN | 2033 | chr3 | 48484178 | 48521601 | 0.0364006 | chr3:04851 | 0.0364006 |
| WDR46 | 2034 | chr6 | 33354840 | 33364897 | 0.0364044 | chr6:03336 | 0.0364044 |
| KCNV1 | 2040 | chr8 | 111053552 | 111061650 | 0.0364368 | chr8:11105 | 0.0364368 |
| BMPR2 | 2044 | chr2 | 202944713 | 202952041 | 0.0364664 | chr2:20295 | 0.0364664 |
| CDCP2 | 2046 | chr1 | 54388871 | 54397268 | 0.036473 | chr1:05439 | 0.036473 |
| IGSF21 | 2049 | chr1 | 18301792 | 18309696 | 0.0364796 | chr1:01830 | 0.0364796 |
| KCNT1 | 2050 | chr9 | 137734236 | 137736647 | 0.0364862 | chr9:13773 | 0.0364862 |
| ADAM19 | 2051 | chr5 | 156933790 | 156936755 | 0.0364926 | chr5:15693 | 0.0364926 |
| BDH1 | 2053 | chr3 | 198765289 | 198789921 | 0.0365042 | chr3:19876 | 0.0365042 |
| NAPRT1 | 2054 | chr8 | 144729415 | 144733023 | 0.036511 | chr8:14472 | 0.036511 |
| ITGAV | 2056 | chr2 | 187158472 | 187165729 | 0.0365303 | chr2:18716 | 0.0365303 |
| THOC1 | 2061 | chr18 | 255751 | 263169 | 0.0365478 | chr18:0002 | 0.0365478 |
| RPP21 | 2066 | chr6 | 30420120 | 30423275 | 0.0365623 | chr6:03042 | 0.0365623 |

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|---|---|---|---|---|---|---|---|
| PDGFRB | 2070 | chr5 | 149473709 | 149515943 | 0.0365881 | chr5:14947 | 0.0365881 |
| ProSAPiP1 | 2073 | chr20 | 3091384 | 3106332 | 0.0365961 | chr20:0030 | 0.0365961 |
| IPO13 | 2074 | chr1 | 44175466 | 44206012 | 0.0366142 | chr1:04418 | 0.0366142 |
| TOM1L1 | 2076 | chr17 | 50327703 | 50335544 | 0.0366277 | chr17:0503 | 0.0366277 |
| GPR30 | 2085 | chr7 | 1087532 | 1099929 | 0.0366837 | chr7:00109 | 0.0366837 |
| ST6GALNA | 2094 | chr17 | 72092385 | 72097670 | 0.0367183 | chr17:0720 | 0.0367183 |
| USP21 | 2096 | chr1 | 159395367 | 159402066 | 0.0367288 | chr1:15939 | 0.0367288 |
| C1orf106 | 2102 | chr1 | 199122958 | 199129687 | 0.0367684 | chr1:19912 | 0.0367684 |
| THBS3 | 2103 | chr1 | 153431871 | 153444259 | 0.0367698 | chr1:15343 | 0.0367698 |
| RG9MTD3 | 2110 | chr9 | 37738951 | 37746297 | 0.0368169 | chr9:03774 | 0.0368169 |
| RAB42 | 2113 | chr1 | 28790655 | 28792813 | 0.0368268 | chr1:02879 | 0.0368268 |
| ANKRD13B | 2115 | chr17 | 24944808 | 24947160 | 0.0368309 | chr17:0249 | 0.0368309 |
| IL9R | 2117 | chrY | 57737572 | 57741833 | 0.0368432 | chrY:05774 | 0.0368432 |
| MGC35154 | 2118 | chr2 | 232163589 | 232167468 | 0.0368435 | chr2:23216 | 0.0368435 |
| IFNW1 | 2120 | chr9 | 21130234 | 21136348 | 0.0368485 | chr9:02113 | 0.0368485 |
| BAZ1A | 2134 | chr14 | 34412089 | 34419625 | 0.0369327 | chr14:0344 | 0.0369327 |
| SYTL1 | 2135 | chr1 | 27535665 | 27546872 | 0.0369387 | chr1:02754 | 0.0369387 |
| GPR103 | 2139 | chr4 | 122518949 | 122526519 | 0.0369726 | chr4:12252 | 0.0369726 |
| DPM1 | 2141 | chr20 | 48984837 | 49008400 | 0.0369931 | chr20:0490 | 0.0369931 |
| CISH | 2147 | chr3 | 50621612 | 50624085 | 0.0370206 | chr3:05062 | 0.0370206 |
| HNRPF | 2148 | chr10 | 43222464 | 43229868 | 0.0370261 | chr10:0432 | 0.0370261 |
| SHKBP1 | 2156 | chr19 | 45774398 | 45788972 | 0.0370558 | chr19:0457 | 0.0370558 |
| PVRL2 | 2157 | chr19 | 50036396 | 50083184 | 0.0370559 | chr19:0500 | 0.0370559 |
| TBX10 | 2161 | chr11 | 67155803 | 67166566 | 0.0370709 | chr11:0671 | 0.0370709 |
| MFRP | 2162 | chr11 | 118716897 | 118728098 | 0.0370729 | chr11:11871 | 0.0370729 |
| PRKAG2 | 2168 | chr7 | 151140595 | 151210217 | 0.0370968 | chr7:15120 | 0.0370968 |
| INSM1 | 2169 | chr20 | 20291571 | 20299427 | 0.0371131 | chr20:0202 | 0.0371131 |
| CYP46A1 | 2174 | chr14 | 99215260 | 99222392 | 0.0371527 | chr14:0992 | 0.0371527 |
| KIAA1009 | 2175 | chr6 | 84992684 | 84999165 | 0.0371532 | chr6:08499 | 0.0371532 |
| LOC399947 | 2177 | chr11 | 108792753 | 108800643 | 0.0371645 | chr11:1087 | 0.0371645 |
| SYT6 | 2178 | chr1 | 114495532 | 114503500 | 0.0371773 | chr1:11449 | 0.0371773 |
| PMF1 | 2180 | chr1 | 154449304 | 154476477 | 0.0371833 | chr1:15444 | 0.0371833 |
| BIRC7 | 2183 | chr20 | 61334202 | 61340368 | 0.0371866 | chr20:0613 | 0.0371866 |
| ZNF711 | 2186 | chrX | 84382346 | 84388876 | 0.0372111 | chrX:08438 | 0.0372111 |
| ZXDC | 2187 | chr3 | 127674430 | 127682000 | 0.0372141 | chr3:12767 | 0.0372141 |
| CASKIN1 | 2190 | chr16 | 2183634 | 2186425 | 0.0372325 | chr16:0021 | 0.0372325 |
| PDCD10 | 2192 | chr3 | 168930778 | 168935294 | 0.0372426 | chr3:16893 | 0.0372426 |
| ALKBH5 | 2196 | chr17 | 18023910 | 18030763 | 0.0372578 | chr17:0180 | 0.0372578 |
| GNG4 | 2200 | chr1 | 233878320 | 233886164 | 0.0372743 | chr1:23387 | 0.0372743 |
| FNDC4 | 2203 | chr2 | 27568258 | 27571578 | 0.037288 | chr2:02757 | 0.037288 |
| CENPM | 2205 | chr22 | 40671167 | 40678480 | 0.0373095 | chr22:0406 | 0.0373095 |
| CAB39 | 2206 | chr2 | 231285134 | 231288320 | 0.0373175 | chr2:23128 | 0.0373175 |
| PARP10 | 2207 | chr8 | 145123336 | 145132517 | 0.0373225 | chr8:14513 | 0.0373225 |
| KIF27 | 2208 | chr9 | 85724119 | 85730186 | 0.0373233 | chr9:08572 | 0.0373233 |
| CNOT8 | 2210 | chr5 | 154218377 | 154220867 | 0.0373282 | chr5:15421 | 0.0373282 |
| PCSK4 | 2212 | chr19 | 1432417 | 1441250 | 0.0373347 | chr19:0014 | 0.0373347 |
| C9orf98 | 2217 | chr9 | 134738568 | 134743980 | 0.0373842 | chr9:13474 | 0.0373842 |
| CCNH | 2218 | chr5 | 86741988 | 86749826 | 0.0373849 | chr5:08674 | 0.0373849 |
| BRI3 | 2219 | chr7 | 97743502 | 97751498 | 0.0373854 | chr7:09775 | 0.0373854 |
| ORC6L | 2221 | chr16 | 45281066 | 45284914 | 0.0373929 | chr16:0452 | 0.0373929 |
| DDX3X | 2228 | chrX | 41073229 | 41080686 | 0.0374201 | chrX:04107 | 0.0374201 |
| ANAPC1 | 2233 | chr2 | 112357253 | 112361998 | 0.0374416 | chr2:11235 | 0.0374416 |
| PLCXD2 | 2244 | chr3 | 112870689 | 113057840 | 0.0374884 | chr3:11287 | 0.0374884 |
| LHX2 | 2246 | chr9 | 125808376 | 125816940 | 0.0374944 | chr9:12581 | 0.0374944 |
| TRIM50 | 2247 | chr7 | 72364580 | 72384927 | 0.0375014 | chr7:07236 | 0.0375014 |
| GPR113 | 2248 | chr2 | 26393050 | 26399762 | 0.0375045 | chr2:02639 | 0.0375045 |
| ENPP4 | 2250 | chr6 | 46202007 | 46206836 | 0.0375259 | chr6:04620 | 0.0375259 |
| ACTN4 | 2255 | chr19 | 43824667 | 43832648 | 0.037547 | chr19:0438 | 0.037547 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| C2orf43 | 2262 | chr2 | 20885219 | 20891401 | 0.0375821 | chr2:020886 | 0.0375821 |
| PTPRN | 2266 | chr2 | 219865141 | 219883689 | 0.0376108 | chr2:21988 | 0.0376108 |
| TNNC1 | 2267 | chr3 | 52460138 | 52463030 | 0.037613 | chr3:05246 | 0.037613 |
| RECQL4 | 2269 | chr8 | 145707474 | 145713848 | 0.0376207 | chr8:145711 | 0.0376207 |
| STOML2 | 2273 | chr9 | 35089897 | 35093746 | 0.0376321 | chr9:03509 | 0.0376321 |
| CDK5R2 | 2275 | chr2 | 219527554 | 219535227 | 0.0376384 | chr2:21953 | 0.0376384 |
| NEUROG3 | 2276 | chr10 | 71000791 | 71008630 | 0.0376444 | chr10:0710 | 0.0376444 |
| MAL2 | 2278 | chr8 | 120285576 | 120292399 | 0.0376546 | chr8:12029 | 0.0376546 |
| DOCK5 | 2283 | chr8 | 25092881 | 25100316 | 0.0376998 | chr8:02509 | 0.0376998 |
| PLXNB3 | 2289 | chrX | 152680653 | 152697902 | 0.0377201 | chrX:15269 | 0.0377201 |
| MPG | 2294 | chr16 | 67117 | 71554 | 0.0377529 | chr16:0000 | 0.0377529 |
| FBXW5 | 2296 | chr9 | 138954102 | 138958842 | 0.0377591 | chr9:13895 | 0.0377591 |
| LCN2 | 2305 | chr9 | 129946042 | 129954115 | 0.0377989 | chr9:12995 | 0.0377989 |
| METRN | 2310 | chr16 | 705361 | 707482 | 0.0378111 | chr16:0007 | 0.0378111 |
| BTF3L4 | 2311 | chr1 | 52294924 | 52299829 | 0.0378166 | chr1:05229 | 0.0378166 |
| RAVER1 | 2313 | chr19 | 10287874 | 10305376 | 0.0378307 | chr19:0102 | 0.0378307 |
| ABCD1 | 2317 | chrX | 152643651 | 152648484 | 0.0378574 | chrX:15264 | 0.0378574 |
| IRF2BP2 | 2318 | chr1 | 232809436 | 232817097 | 0.037875 | chr1:23281 | 0.037875 |
| C16orf55 | 2323 | chr16 | 88251711 | 88255741 | 0.037892 | chr16:0882 | 0.037892 |
| H2AFY2 | 2327 | chr10 | 71477530 | 71485067 | 0.037904 | chr10:0714 | 0.037904 |
| CEBPZ | 2328 | chr2 | 37307443 | 37312124 | 0.037914 | chr2:03731 | 0.037914 |
| ATP6V1A | 2329 | chr3 | 114948589 | 114953151 | 0.0379147 | chr3:11494 | 0.0379147 |
| ZNF579 | 2331 | chr19 | 60781551 | 60789185 | 0.0379222 | chr19:0607 | 0.0379222 |
| EPHB4 | 2332 | chr7 | 100260122 | 100267319 | 0.0379272 | chr7:10026 | 0.0379272 |
| ARSI | 2334 | chr5 | 149659742 | 149667507 | 0.0379541 | chr5:14966 | 0.0379541 |
| ITPR2 | 2337 | chr12 | 26874465 | 26882751 | 0.037962 | chr12:0268 | 0.037962 |
| PSCA | 2338 | chr8 | 143758496 | 143761284 | 0.0379761 | chr8:14376 | 0.0379761 |
| PCDHA12 | 2339 | chr5 | 140231457 | 140237579 | 0.037979 | chr5:14023 | 0.037979 |
| PHF17 | 2340 | chr4 | 129945189 | 129952891 | 0.0379817 | chr4:12995 | 0.0379817 |
| ZBTB48 | 2342 | chr1 | 6562434 | 6565393 | 0.0379831 | chr1:00656 | 0.0379831 |
| PRR5 | 2344 | chr22 | 43445886 | 43507907 | 0.0379853 | chr22:0434 | 0.0379853 |
| ITIH1 | 2347 | chr3 | 52786702 | 52801103 | 0.0379989 | chr3:05278 | 0.0379989 |
| UACA | 2348 | chr15 | 68840725 | 68848366 | 0.0379995 | chr15:0688 | 0.0379995 |
| BHLHB4 | 2350 | chr20 | 61106133 | 61112057 | 0.0380047 | chr20:0611 | 0.0380047 |
| MSC | 2351 | chr8 | 72916695 | 72924774 | 0.0380059 | chr8:07291 | 0.0380059 |
| HS3ST2 | 2353 | chr16 | 22727686 | 22735909 | 0.03801 | chr16:0227 | 0.03801 |
| PKIG | 2355 | chr20 | 42671267 | 42679051 | 0.0380124 | chr20:0426 | 0.0380124 |
| COL7A1 | 2356 | chr3 | 48576541 | 48611396 | 0.038018 | chr3:04858 | 0.038018 |
| MED12 | 2359 | chrX | 70255159 | 70278990 | 0.0380339 | chrX:07025 | 0.0380339 |
| PHF15 | 2361 | chr5 | 133883927 | 133892225 | 0.0380492 | chr5:13388 | 0.0380492 |
| OAF | 2362 | chr11 | 119582375 | 119589624 | 0.038052 | chr11:1195 | 0.038052 |
| C6orf81 | 2363 | chr6 | 35803041 | 35814552 | 0.0380578 | chr6:03581 | 0.0380578 |
| C11orf2 | 2364 | chr11 | 64612521 | 64635765 | 0.0380597 | chr11:0646 | 0.0380597 |
| SF3A3 | 2365 | chr1 | 38225807 | 38234668 | 0.038061 | chr1:03822 | 0.038061 |
| PLEKHH2 | 2366 | chr2 | 43712502 | 43719853 | 0.0380799 | chr2:04371 | 0.0380799 |
| FNIP1 | 2367 | chr5 | 131158725 | 131164339 | 0.0380825 | chr5:13116 | 0.0380825 |
| FGF13 | 2373 | chrX | 137575133 | 137654472 | 0.0380949 | chrX:1376 | 0.0380949 |
| BGN | 2379 | chrX | 152408134 | 152425794 | 0.0381212 | chrX:15242 | 0.0381212 |
| FCN3 | 2381 | chr1 | 27568170 | 27578190 | 0.0381293 | chr1:02757 | 0.0381293 |
| SLC7A11 | 2384 | chr4 | 139380366 | 139385732 | 0.0381432 | chr4:13938 | 0.0381432 |
| CLN6 | 2385 | chr15 | 66286356 | 66314124 | 0.0381463 | chr15:0662 | 0.0381463 |
| LETM2 | 2387 | chr8 | 38363203 | 38364683 | 0.0381518 | chr8:03836 | 0.0381518 |
| CREB3 | 2390 | chr9 | 35722365 | 35727678 | 0.0381637 | chr9:03572 | 0.0381637 |
| GPR6 | 2394 | chr6 | 110401589 | 110408667 | 0.0382105 | chr6:11040 | 0.0382105 |
| HS6ST2 | 2395 | chrX | 131916467 | 131924484 | 0.0382142 | chrX:13192 | 0.0382142 |
| AIRE | 2398 | chr21 | 44525221 | 44542220 | 0.038223 | chr21:0445 | 0.038223 |
| ENO2 | 2400 | chr12 | 6893847 | 6903119 | 0.0382341 | chr12:0068 | 0.0382341 |
| DMWD | 2403 | chr19 | 50978126 | 50990735 | 0.0382384 | chr19:0509 | 0.0382384 |

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|---|---|---|---|---|---|---|---|
| DNAJB9 | 2409 | chr7 | 107997624 | 108002919 | 0.0382526 | chr7:107997 | 0.0382526 |
| DNMT3A | 2411 | chr2 | 25415742 | 25424139 | 0.0382706 | chr2:025416 | 0.0382706 |
| TRIM9 | 2416 | chr14 | 50629101 | 50637974 | 0.0383039 | chr14:05063 | 0.0383039 |
| GYPC | 2418 | chr2 | 127126583 | 127132823 | 0.0383085 | chr2:12713 | 0.0383085 |
| IFT74 | 2426 | chr9 | 26946425 | 26948903 | 0.0383803 | chr9:026946 | 0.0383803 |
| KIAA1914 | 2427 | chr10 | 116151882 | 116160006 | 0.0383817 | chr10:11615 | 0.0383817 |
| PIK3R4 | 2429 | chr3 | 131946060 | 131952948 | 0.0383882 | chr3:131948 | 0.0383882 |
| CRAT | 2432 | chr9 | 130907722 | 130912739 | 0.03841 | chr9:13091( | 0.03841 |
| TMEM16A | 2433 | chr11 | 69596843 | 69611660 | 0.0384122 | chr11:06960 | 0.0384122 |
| GPD1 | 2434 | chr12 | 48780931 | 48791372 | 0.0384125 | chr12:04878 | 0.0384125 |
| HSD17B14 | 2436 | chr19 | 54008214 | 54031646 | 0.0384316 | chr19:05403 | 0.0384316 |
| IRS4 | 2440 | chrX | 107863724 | 107871805 | 0.0384548 | chrX:10786 | 0.0384548 |
| USP2 | 2443 | chr11 | 118737646 | 118758217 | 0.0384723 | chr11:11875 | 0.0384723 |
| PAQR3 | 2444 | chr4 | 80077016 | 80084946 | 0.03848 | chr4:08007 | 0.03848 |
| C14orf172 | 2445 | chr14 | 103065252 | 103067659 | 0.0384867 | chr14:10306 | 0.0384867 |
| ARV1 | 2449 | chr1 | 229181427 | 229186323 | 0.0385081 | chr1:22918 | 0.0385081 |
| C6orf153 | 2451 | chr6 | 43097008 | 43097807 | 0.0385149 | chr6:043097 | 0.0385149 |
| STMN3 | 2456 | chr20 | 61753291 | 61755134 | 0.0385352 | chr20:06175 | 0.0385352 |
| SERPINB1 | 2461 | chr6 | 2784731 | 2792497 | 0.0385653 | chr6:002786 | 0.0385653 |
| HEATR5B | 2462 | chr2 | 37159687 | 37164844 | 0.0385757 | chr2:037164 | 0.0385757 |
| SERF2 | 2463 | chr15 | 41866805 | 41873988 | 0.0385942 | chr15:04187 | 0.0385942 |
| IL7 | 2464 | chr8 | 79877758 | 79885841 | 0.0385952 | chr8:07987 | 0.0385952 |
| AP3D1 | 2468 | chr19 | 2051461 | 2103088 | 0.0386437 | chr19:0021( | 0.0386437 |
| RARA | 2471 | chr17 | 35713551 | 35754671 | 0.0386512 | chr17:03575 | 0.0386512 |
| DNAJB8 | 2473 | chr3 | 129663166 | 129674130 | 0.0386576 | chr3:12966 | 0.0386576 |
| SAR1B | 2476 | chr5 | 133994943 | 134000978 | 0.0386675 | chr5:13399 | 0.0386675 |
| AYTL2 | 2482 | chr5 | 1574570 | 1581847 | 0.0387007 | chr5:00157 | 0.0387007 |
| GGN | 2485 | chr19 | 43567274 | 43570490 | 0.0387058 | chr19:04357 | 0.0387058 |
| CHX10 | 2491 | chr14 | 73770626 | 73778193 | 0.0387153 | chr14:07377 | 0.0387153 |
| PRRG1 | 2498 | chrX | 37088828 | 37096063 | 0.0387466 | chrX:03709 | 0.0387466 |
| C19orf28 | 2500 | chr19 | 3505935 | 3513483 | 0.0387582 | chr19:0035( | 0.0387582 |
| WNT16 | 2502 | chr7 | 120749429 | 120759063 | 0.0387735 | chr7:12075 | 0.0387735 |
| AP2A1 | 2503 | chr19 | 54962230 | 54963685 | 0.0387748 | chr19:05496 | 0.0387748 |
| LOC63928 | 2504 | chr16 | 23670830 | 23676389 | 0.0387776 | chr16:02367 | 0.0387776 |
| POGK | 2506 | chr1 | 165071900 | 165077721 | 0.0387923 | chr1:16507 | 0.0387923 |
| LOC619208 | 2512 | chr6 | 112515450 | 112518269 | 0.0388213 | chr6:11251 | 0.0388213 |
| ALPI | 2514 | chr2 | 233024633 | 233031342 | 0.0388249 | chr2:23302 | 0.0388249 |
| DCTN4 | 2519 | chr5 | 150116354 | 150123708 | 0.0388431 | chr5:15011 | 0.0388431 |
| ARNT | 2527 | chr1 | 149048794 | 149121306 | 0.0388581 | chr1:14911 | 0.0388581 |
| TRRAP | 2528 | chr7 | 98314063 | 98316508 | 0.0388686 | chr7:09831 | 0.0388686 |
| STAC2 | 2531 | chr17 | 34632896 | 34641007 | 0.0388877 | chr17:0346 | 0.0388877 |
| TNS3 | 2532 | chr7 | 47415431 | 47551151 | 0.03889 | chr7:04742( | 0.03889 |
| CCBL1 | 2534 | chr9 | 130635191 | 130684170 | 0.0389041 | chr9:13068 | 0.0389041 |
| DSP | 2535 | chr6 | 7481462 | 7531881 | 0.0389065 | chr6:00748 | 0.0389065 |
| FAM44A | 2536 | chr4 | 13235977 | 13243808 | 0.0389141 | chr4:01323 | 0.0389141 |
| TANK | 2538 | chr2 | 161696901 | 161745361 | 0.0389183 | chr2:16172 | 0.0389183 |
| FLJ38377 | 2542 | chr2 | 131224178 | 131231886 | 0.0389304 | chr2:13123( | 0.0389304 |
| ADAMTS1 | 2546 | chr21 | 27137151 | 27145011 | 0.0389561 | chr21:0271 | 0.0389561 |
| SERPINF1 | 2548 | chr17 | 1607659 | 1614632 | 0.03897 | chr17:0016 | 0.03897 |
| MID1IP1 | 2550 | chrX | 38540245 | 38550517 | 0.0390031 | chrX:03854 | 0.0390031 |
| PTK2B | 2551 | chr8 | 27225013 | 27241380 | 0.0390099 | chr8:02723 | 0.0390099 |
| CACNA1A | 2556 | chr19 | 13475559 | 13483528 | 0.0390352 | chr19:0134 | 0.0390352 |
| PIP5K1C | 2559 | chr19 | 3648942 | 3656654 | 0.0390529 | chr19:0036 | 0.0390529 |
| TOPBP1 | 2565 | chr3 | 134862227 | 134867647 | 0.039091 | chr3:13486 | 0.039091 |
| CTBP2 | 2566 | chr10 | 126703791 | 126845069 | 0.0390969 | chr10:1267( | 0.0390969 |
| POLRMT | 2567 | chr19 | 583284 | 584355 | 0.0391006 | chr19:0005 | 0.0391006 |
| FSTL1 | 2572 | chr3 | 121594993 | 121655657 | 0.0391231 | chr3:12165 | 0.0391231 |
| PSAT1 | 2580 | chr9 | 80096428 | 80104166 | 0.0391456 | chr9:08010 | 0.0391456 |

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| VEPH1 | 2582 | chr3 | 158697671 | 158709545 | 0.0391556 | chr3:158699 | 0.0391556 |
| TESC | 2585 | chr12 | 116019186 | 116027038 | 0.0391679 | chr12:11602 | 0.0391679 |
| ZNF414 | 2591 | chr19 | 8482579 | 8489848 | 0.0392108 | chr19:00848 | 0.0392108 |
| C15orf23 | 2595 | chr15 | 38459171 | 38464919 | 0.0392555 | chr15:03846 | 0.0392555 |
| CCNB2 | 2597 | chr15 | 57179572 | 57187215 | 0.0392754 | chr15:05718 | 0.0392754 |
| SBNO2 | 2598 | chr19 | 1122748 | 1130189 | 0.0392793 | chr19:00112 | 0.0392793 |
| OSR1 | 2599 | chr2 | 19419500 | 19427300 | 0.0392844 | chr2:019421 | 0.0392844 |
| POLR3B | 2602 | chr12 | 105270274 | 105277196 | 0.0392949 | chr12:10527 | 0.0392949 |
| KIAA1522 | 2605 | chr1 | 32998351 | 33006265 | 0.0393351 | chr1:032999 | 0.0393351 |
| VBP1 | 2607 | chrX | 154092231 | 154100178 | 0.0393453 | chrX:15409 | 0.0393453 |
| KCND1 | 2610 | chrX | 48703572 | 48715080 | 0.0393854 | chrX:04870 | 0.0393854 |
| LYPD3 | 2613 | chr19 | 48659123 | 48666537 | 0.039387 | chr19:04865 | 0.039387 |
| GTF2H4 | 2616 | chr6 | 30982265 | 30989858 | 0.0393926 | chr6:030989 | 0.0393926 |
| C20orf112 | 2618 | chr20 | 30523882 | 30538118 | 0.0394114 | chr20:03053 | 0.0394114 |
| HK2 | 2621 | chr2 | 74907896 | 74917681 | 0.0394367 | chr2:074915 | 0.0394367 |
| MANEA | 2622 | chr6 | 96126730 | 96134609 | 0.0394369 | chr6:096132 | 0.0394369 |
| KIAA1539 | 2629 | chr9 | 35094318 | 35111304 | 0.0395047 | chr9:035102 | 0.0395047 |
| SASP | 2634 | chr2 | 70039594 | 70048394 | 0.039523 | chr2:070042 | 0.039523 |
| GCN5L2 | 2635 | chr17 | 37518634 | 37526620 | 0.0395231 | chr17:03752 | 0.0395231 |
| PRKCA | 2637 | chr17 | 61723895 | 61731848 | 0.039537 | chr17:06172 | 0.039537 |
| CCT5 | 2638 | chr5 | 10303288 | 10308004 | 0.0395394 | chr5:010304 | 0.0395394 |
| TRIM15 | 2639 | chr6 | 30233971 | 30240300 | 0.0395429 | chr6:030239 | 0.0395429 |
| TEF | 2640 | chr22 | 40102549 | 40110501 | 0.0395559 | chr22:04010 | 0.0395559 |
| WDR19 | 2642 | chr4 | 38856020 | 38862775 | 0.0395591 | chr4:038860 | 0.0395591 |
| BMP2K | 2649 | chr4 | 79911083 | 79918939 | 0.0395861 | chr4:079916 | 0.0395861 |
| CHRND | 2655 | chr2 | 233093725 | 233108437 | 0.039631 | chr2:233099 | 0.039631 |
| ETV2 | 2657 | chr19 | 40820560 | 40827626 | 0.0396388 | chr19:04082 | 0.0396388 |
| WDR75 | 2661 | chr2 | 190010047 | 190016635 | 0.0396523 | chr2:190014 | 0.0396523 |
| FAM98A | 2664 | chr2 | 33675523 | 33683220 | 0.0396743 | chr2:033677 | 0.0396743 |
| GPR88 | 2668 | chr1 | 100772656 | 100779531 | 0.0396849 | chr1:100777 | 0.0396849 |
| ADAM8 | 2670 | chr10 | 134938157 | 134945720 | 0.0397021 | chr10:13493 | 0.0397021 |
| LZTS2 | 2676 | chr10 | 102744371 | 102755613 | 0.0397208 | chr10:10274 | 0.0397208 |
| C2orf53 | 2682 | chr2 | 27213461 | 27215751 | 0.0397522 | chr2:027213 | 0.0397522 |
| ILK | 2690 | chr11 | 6581656 | 6588562 | 0.039776 | chr11:00658 | 0.039776 |
| PLSCR1 | 2691 | chr3 | 147743095 | 147750632 | 0.0397796 | chr3:147745 | 0.0397796 |
| CDC25B | 2696 | chr20 | 3724542 | 3727865 | 0.0398205 | chr20:00372 | 0.0398205 |
| TTC35 | 2701 | chr8 | 109519751 | 109527071 | 0.0398318 | chr8:109525 | 0.0398318 |
| LOC284361 | 2702 | chr19 | 55665249 | 55671805 | 0.0398322 | chr19:05567 | 0.0398322 |
| USP47 | 2704 | chr11 | 11817534 | 11822400 | 0.0398337 | chr11:01182 | 0.0398337 |
| CCDC33 | 2713 | chr15 | 72392499 | 72400425 | 0.0398769 | chr15:07239 | 0.0398769 |
| AIFM3 | 2716 | chr22 | 19644558 | 19665662 | 0.0398937 | chr22:01965 | 0.0398937 |
| TRADD | 2722 | chr16 | 65745841 | 65751304 | 0.0399406 | chr16:06574 | 0.0399406 |
| GLMN | 2726 | chr1 | 92533124 | 92537090 | 0.0399465 | chr1:092536 | 0.0399465 |
| BTBD8 | 2727 | chr1 | 92314892 | 92320989 | 0.0399516 | chr1:092318 | 0.0399516 |
| MAGED1 | 2728 | chrX | 51649631 | 51656558 | 0.0399575 | chrX:05165 | 0.0399575 |
| CSTF2 | 2733 | chrX | 99957438 | 99964582 | 0.0399761 | chrX:09996 | 0.0399761 |
| AMBP | 2737 | chr9 | 115878804 | 115886048 | 0.0399907 | chr9:11588( | 0.0399907 |
| MN1 | 2739 | chr22 | 26524061 | 26532878 | 0.0399984 | chr22:02652 | 0.0399984 |
| PROP1 | 2749 | chr5 | 177353113 | 177358300 | 0.040058 | chr5:17735 | 0.040058 |
| TEAD2 | 2751 | chr19 | 54554387 | 54557524 | 0.0400703 | chr19:05455 | 0.0400703 |
| KCNQ1DN | 2753 | chr11 | 2842471 | 2850059 | 0.0400704 | chr11:00284 | 0.0400704 |
| SUMO3 | 2755 | chr21 | 45049976 | 45065451 | 0.0400771 | chr21:04506 | 0.0400771 |
| PAPSS1 | 2759 | chr4 | 108858400 | 108862174 | 0.0401114 | chr4:10886( | 0.0401114 |
| RAB9B | 2761 | chrX | 102964938 | 102976764 | 0.0401169 | chrX:10297 | 0.0401169 |
| KL | 2763 | chr13 | 32485468 | 32491048 | 0.0401191 | chr13:03248 | 0.0401191 |
| EFCBP1 | 2766 | chr8 | 91868268 | 91875806 | 0.0401252 | chr8:091873 | 0.0401252 |
| HSPB9 | 2773 | chr17 | 37528376 | 37528916 | 0.040157 | chr17:03752 | 0.040157 |
| HRAS | 2779 | chr11 | 521990 | 525198 | 0.0401865 | chr11:00052 | 0.0401865 |

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| PRLHR | 2784 | chr10 | 120342455 | 120350300 | 0.0402083 | chr10:1203 | 0.0402083 |
| DDHD1 | 2785 | chr14 | 52687275 | 52694728 | 0.0402085 | chr14:0526 | 0.0402085 |
| SLC25A25 | 2787 | chr9 | 129870296 | 129903181 | 0.0402127 | chr9:12990 | 0.0402127 |
| PLXNA1 | 2788 | chr3 | 128185229 | 128192601 | 0.0402148 | chr3:12819 | 0.0402148 |
| GTPBP4 | 2789 | chr10 | 1018882 | 1054034 | 0.0402169 | chr10:0010 | 0.0402169 |
| TOM1 | 2790 | chr22 | 34021985 | 34028143 | 0.0402257 | chr22:0340 | 0.0402257 |
| LATS2 | 2793 | chr13 | 20531386 | 20538674 | 0.0402519 | chr13:0205 | 0.0402519 |
| CNN1 | 2797 | chr19 | 11510636 | 11513014 | 0.040278 | chr19:01151 | 0.040278 |
| ACVR2B | 2798 | chr3 | 38466484 | 38509650 | 0.0402794 | chr3:03847 | 0.0402794 |
| SNX2 | 2800 | chr5 | 122133247 | 122140694 | 0.0402896 | chr5:12213 | 0.0402896 |
| RAB11FIP3 | 2801 | chr16 | 410855 | 512410 | 0.0402912 | chr16:0004 | 0.0402912 |
| APLN | 2802 | chrX | 128614085 | 128622096 | 0.0402943 | chrX:12861 | 0.0402943 |
| SRCRB4D | 2806 | chr7 | 75864840 | 75881887 | 0.0403093 | chr7:07587 | 0.0403093 |
| HDGF | 2811 | chr1 | 154979484 | 154993569 | 0.040338 | chr1:15497 | 0.040338 |
| ST6GALNA | 2814 | chr1 | 77100767 | 77108182 | 0.0403562 | chr1:07710 | 0.0403562 |
| PSORS1C1 | 2815 | chr6 | 31190615 | 31216756 | 0.0403581 | chr6:03119 | 0.0403581 |
| PARP3 | 2818 | chr3 | 51951582 | 51956407 | 0.0403833 | chr3:05195 | 0.0403833 |
| DEPDC2 | 2820 | chr8 | 69021590 | 69029627 | 0.0404005 | chr8:06902 | 0.0404005 |
| CLSTN2 | 2823 | chr3 | 141132023 | 141138920 | 0.0404154 | chr3:14113 | 0.0404154 |
| FLJ22167 | 2829 | chr16 | 74129982 | 74147722 | 0.0404342 | chr16:0741 | 0.0404342 |
| TLX1 | 2830 | chr10 | 102875963 | 102883770 | 0.0404381 | chr10:1028 | 0.0404381 |
| MLLT11 | 2838 | chr1 | 149298780 | 149307584 | 0.0404718 | chr1:14929 | 0.0404718 |
| PTPN6 | 2840 | chr12 | 6925449 | 6940744 | 0.040474 | chr12:0069 | 0.040474 |
| C6orf64 | 2843 | chr6 | 39188330 | 39195989 | 0.0405068 | chr6:03919 | 0.0405068 |
| RP1L1 | 2845 | chr8 | 10547553 | 10555231 | 0.0405144 | chr8:01054 | 0.0405144 |
| C20orf58 | 2847 | chr20 | 61353966 | 61361715 | 0.040525 | chr20:0613 | 0.040525 |
| SIVA1 | 2852 | chr14 | 104285418 | 104293016 | 0.0405672 | chr14:1042 | 0.0405672 |
| GRIPAP1 | 2853 | chrX | 48715256 | 48744255 | 0.0405692 | chrX:04874 | 0.0405692 |
| SEC24C | 2855 | chr10 | 75170424 | 75201928 | 0.0405787 | chr10:0751 | 0.0405787 |
| ELOF1 | 2856 | chr19 | 11523704 | 11531304 | 0.0405792 | chr19:0115 | 0.0405792 |
| GRM7 | 2869 | chr3 | 6872719 | 6880482 | 0.0406394 | chr3:00687 | 0.0406394 |
| MGC33407 | 2870 | chr19 | 8667547 | 8674909 | 0.0406409 | chr19:0086 | 0.0406409 |
| IRAK1 | 2874 | chrX | 152935936 | 152940363 | 0.0406799 | chrX:15293 | 0.0406799 |
| MGC10433 | 2875 | chr19 | 40806751 | 40820442 | 0.0406845 | chr19:0408 | 0.0406845 |
| LOC153364 | 2881 | chr5 | 89803442 | 89806272 | 0.0407208 | chr5:08980 | 0.0407208 |
| GPR50 | 2882 | chrX | 150090266 | 150098178 | 0.0407218 | chrX:15009 | 0.0407218 |
| USH1C | 2888 | chr11 | 17520483 | 17528033 | 0.0407667 | chr11:0175 | 0.0407667 |
| ZNF342 | 2889 | chr19 | 50269569 | 50271410 | 0.0407678 | chr19:0502 | 0.0407678 |
| LOXL2 | 2890 | chr8 | 23315139 | 23321490 | 0.0407685 | chr8:02331 | 0.0407685 |
| YRDC | 2893 | chr1 | 38041395 | 38046418 | 0.0407815 | chr1:03804 | 0.0407815 |
| CFTR | 2894 | chr7 | 116901724 | 116909825 | 0.0407919 | chr7:11690 | 0.0407919 |
| TMEM79 | 2898 | chr1 | 154519390 | 154522968 | 0.0408067 | chr1:15452 | 0.0408067 |
| APBB3 | 2899 | chr5 | 139918044 | 139924365 | 0.0408099 | chr5:13992 | 0.0408099 |
| KLF2 | 2901 | chr19 | 16291279 | 16299176 | 0.040821 | chr19:0162 | 0.040821 |
| FRAS1 | 2902 | chr4 | 79193519 | 79200653 | 0.0408398 | chr4:07919 | 0.0408398 |
| SPHK2 | 2903 | chr19 | 53814478 | 53819755 | 0.0408474 | chr19:0538 | 0.0408474 |
| SSR4 | 2904 | chrX | 152713287 | 152718325 | 0.0408545 | chrX:15271 | 0.0408545 |
| GPR173 | 2906 | chrX | 53089781 | 53123892 | 0.0408558 | chrX:05312 | 0.0408558 |
| RIF1 | 2908 | chr2 | 151969931 | 151977017 | 0.0408759 | chr2:15197 | 0.0408759 |
| NKPD1 | 2909 | chr19 | 50346403 | 50354308 | 0.040876 | chr19:0503 | 0.040876 |
| TETRAN | 2910 | chr4 | 2903164 | 2909393 | 0.0408799 | chr4:00290 | 0.0408799 |
| DNASE1L2 | 2913 | chr16 | 2225899 | 2228908 | 0.0409024 | chr16:0022 | 0.0409024 |
| ZNF653 | 2920 | chr19 | 11455246 | 11477817 | 0.0409402 | chr19:0114 | 0.0409402 |
| SCD5 | 2926 | chr4 | 83936609 | 83941782 | 0.0409593 | chr4:08393 | 0.0409593 |
| NR0B1 | 2927 | chrX | 30235048 | 30242485 | 0.0409629 | chrX:03023 | 0.0409629 |
| FAM108A1 | 2928 | chr19 | 1831252 | 1839480 | 0.0409731 | chr19:0018 | 0.0409731 |
| CD81 | 2934 | chr11 | 2352266 | 2375203 | 0.0410085 | chr11:0023 | 0.0410085 |
| RASL10B | 2935 | chr17 | 31077518 | 31084898 | 0.0410147 | chr17:0310 | 0.0410147 |

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| C8orf13 | 2938 | chr8 | 11359186 | 11366364 | 0.041023 | chr8:011359 | 0.041023 |
| TRAF2 | 2948 | chr9 | 138895927 | 138915466 | 0.0410618 | chr9:138912 | 0.0410618 |
| ZNF184 | 2951 | chr6 | 27545802 | 27554366 | 0.0410673 | chr6:027548 | 0.0410673 |
| IFIH1 | 2957 | chr2 | 162880579 | 162886911 | 0.0410868 | chr2:162882 | 0.0410868 |
| PSD2 | 2962 | chr5 | 139151953 | 139158092 | 0.0410978 | chr5:139157 | 0.0410978 |
| TNFAIP2 | 2963 | chr14 | 102657331 | 102665000 | 0.0410984 | chr14:10266 | 0.0410984 |
| MFHAS1 | 2964 | chr8 | 8785697 | 8793312 | 0.041111 | chr8:008785 | 0.041111 |
| PHLDA3 | 2967 | chr1 | 199702145 | 199708998 | 0.0411178 | chr1:19970 | 0.0411178 |
| MAGEA5 | 2971 | chrX | 151034811 | 151041923 | 0.0411349 | chrX:15103 | 0.0411349 |
| USP20 | 2977 | chr9 | 131637613 | 131642561 | 0.0411781 | chr9:131642 | 0.0411781 |
| TMED9 | 2978 | chr5 | 176947336 | 176955710 | 0.0411791 | chr5:17695 | 0.0411791 |
| PARD3B | 2980 | chr2 | 205113434 | 205121302 | 0.0411841 | chr2:20511 | 0.0411841 |
| CCDC96 | 2982 | chr4 | 7093740 | 7101016 | 0.0411849 | chr4:00709 | 0.0411849 |
| CAT | 2983 | chr11 | 34411883 | 34419263 | 0.0412016 | chr11:03441 | 0.0412016 |
| PAQR7 | 2989 | chr1 | 26060545 | 26075485 | 0.041233 | chr1:026069 | 0.041233 |
| HS3ST3B1 | 2995 | chr17 | 14140099 | 14147999 | 0.0412538 | chr17:01414 | 0.0412538 |
| KPNB1 | 2996 | chr17 | 43077010 | 43085044 | 0.0412636 | chr17:04308 | 0.0412636 |
| PSMB4 | 2997 | chr1 | 149635231 | 149641094 | 0.0412711 | chr1:14963 | 0.0412711 |
| SEZ6L | 3001 | chr22 | 24890090 | 24898070 | 0.0412911 | chr22:02489 | 0.0412911 |
| FADS6 | 3002 | chr17 | 70385419 | 70406277 | 0.0412969 | chr17:07040 | 0.0412969 |
| B3GALT4 | 3003 | chr6 | 33352245 | 33354709 | 0.0413003 | chr6:033353 | 0.0413003 |
| INSIG2 | 3004 | chr2 | 118557041 | 118564766 | 0.0413005 | chr2:118562 | 0.0413005 |
| PPWD1 | 3007 | chr5 | 64894955 | 64899602 | 0.0413121 | chr5:06489 | 0.0413121 |
| EPHA5 | 3008 | chr4 | 66215657 | 66223488 | 0.0413174 | chr4:066216 | 0.0413174 |
| SCARA5 | 3012 | chr8 | 27899309 | 27911619 | 0.0413612 | chr8:027903 | 0.0413612 |
| ARSK | 3015 | chr5 | 94916612 | 94919208 | 0.0413699 | chr5:094916 | 0.0413699 |
| BAX | 3018 | chr19 | 54146275 | 54156888 | 0.0413763 | chr19:05415 | 0.0413763 |
| SOX13 | 3021 | chr1 | 202303388 | 202311220 | 0.041382 | chr1:20231 | 0.041382 |
| ZMYND10 | 3031 | chr3 | 50353536 | 50358464 | 0.0414419 | chr3:05035 | 0.0414419 |
| TTC29 | 3032 | chr4 | 148084039 | 148091241 | 0.041445 | chr4:14808 | 0.041445 |
| ARHGAP30 | 3035 | chr1 | 159283451 | 159308115 | 0.0414634 | chr1:15930 | 0.0414634 |
| CCNC | 3049 | chr6 | 100120798 | 100128442 | 0.0415199 | chr6:10012 | 0.0415199 |
| EGR2 | 3050 | chr10 | 64243403 | 64251556 | 0.0415212 | chr10:0642 | 0.0415212 |
| P2RX3 | 3055 | chr11 | 56862673 | 56865375 | 0.0415461 | chr11:0568 | 0.0415461 |
| CD248 | 3059 | chr11 | 65838772 | 65842778 | 0.0415906 | chr11:06583 | 0.0415906 |
| LTB4R2 | 3061 | chr14 | 23844228 | 23850320 | 0.0415947 | chr14:02385 | 0.0415947 |
| FBXO4 | 3067 | chr5 | 41957527 | 41963560 | 0.0416116 | chr5:04196 | 0.0416116 |
| SP4 | 3070 | chr7 | 21428732 | 21436916 | 0.0416222 | chr7:02143 | 0.0416222 |
| HCRTR1 | 3071 | chr1 | 31851803 | 31859890 | 0.0416305 | chr1:03185 | 0.0416305 |
| FUBP1 | 3072 | chr1 | 78215066 | 78222811 | 0.0416476 | chr1:07821 | 0.0416476 |
| NDUFV1 | 3073 | chr11 | 67130990 | 67136191 | 0.041656 | chr11:06713 | 0.041656 |
| CHST13 | 3084 | chr3 | 127725999 | 127728285 | 0.041698 | chr3:12772 | 0.041698 |
| COX7A1 | 3087 | chr19 | 41333401 | 41337211 | 0.0417127 | chr19:04133 | 0.0417127 |
| DVL3 | 3088 | chr3 | 185350954 | 185372927 | 0.0417152 | chr3:18535 | 0.0417152 |
| APLP1 | 3089 | chr19 | 41049866 | 41053784 | 0.041718 | chr19:0410 | 0.041718 |
| SH3GLB2 | 3090 | chr9 | 130827787 | 130830217 | 0.0417258 | chr9:13082 | 0.0417258 |
| PRDX1 | 3091 | chr1 | 45757755 | 45764901 | 0.041736 | chr1:04575 | 0.041736 |
| LPPR2 | 3093 | chr19 | 11327141 | 11329412 | 0.0417379 | chr19:01132 | 0.0417379 |
| IRX3 | 3099 | chr16 | 52875157 | 52883323 | 0.0417562 | chr16:0528 | 0.0417562 |
| HS6ST3 | 3101 | chr13 | 95536028 | 95543612 | 0.0417661 | chr13:0955 | 0.0417661 |
| GIT1 | 3103 | chr17 | 24938054 | 24940523 | 0.041773 | chr17:02493 | 0.041773 |
| ARMCX3 | 3107 | chrX | 100764793 | 100767402 | 0.0418059 | chrX:10076 | 0.0418059 |
| UNG | 3114 | chr12 | 108019856 | 108022943 | 0.0418606 | chr12:1080 | 0.0418606 |
| LTC4S | 3117 | chr5 | 179148080 | 179155941 | 0.0418665 | chr5:17915 | 0.0418665 |
| CXorf34 | 3119 | chrX | 100191459 | 100199165 | 0.0418919 | chrX:10019 | 0.0418919 |
| NDUFC2 | 3135 | chr11 | 77466680 | 77469145 | 0.0419796 | chr11:0774 | 0.0419796 |
| SYN1 | 3136 | chrX | 47361561 | 47368576 | 0.0419811 | chrX:04736 | 0.0419811 |
| OTUB2 | 3141 | chr14 | 93557991 | 93564686 | 0.0419954 | chr14:0935 | 0.0419954 |

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| CD164L2 | 3152 | chr1 | 27578354 | 27582293 | 0.0420647 | chr1:02757 | 0.0420647 |
| ZNF35 | 3153 | chr3 | 44664952 | 44667426 | 0.0420683 | chr3:04466 | 0.0420683 |
| FLJ16008 | 3158 | chr2 | 127677616 | 127680822 | 0.0420988 | chr2:12767 | 0.0420988 |
| OMA1 | 3161 | chr1 | 58774916 | 58790383 | 0.0421053 | chr1:05878 | 0.0421053 |
| G6PC3 | 3162 | chr17 | 39503768 | 39506343 | 0.0421163 | chr17:0395 | 0.0421163 |
| PPP1R12C | 3164 | chr19 | 60318050 | 60324243 | 0.0421268 | chr19:0603 | 0.0421268 |
| TAP1 | 3167 | chr6 | 32921030 | 32929657 | 0.0421375 | chr6:03292 | 0.0421375 |
| PVRIG | 3171 | chr7 | 99650816 | 99657036 | 0.0421504 | chr7:09965 | 0.0421504 |
| PHF21B | 3174 | chr22 | 43781811 | 43789622 | 0.0421704 | chr22:0437 | 0.0421704 |
| ZCCHC3 | 3180 | chr20 | 226185 | 228670 | 0.0421909 | chr20:0002 | 0.0421909 |
| URP2 | 3182 | chr11 | 63728809 | 63747812 | 0.0421932 | chr11:0637 | 0.0421932 |
| GRRP1 | 3184 | chr1 | 26353131 | 26360544 | 0.0422127 | chr1:02636 | 0.0422127 |
| GSG2 | 3185 | chr17 | 3568458 | 3576414 | 0.0422199 | chr17:0035 | 0.0422199 |
| CEECAM1 | 3186 | chr9 | 130221213 | 130225423 | 0.0422232 | chr9:13022 | 0.0422232 |
| ZNF276 | 3189 | chr16 | 88315017 | 88318697 | 0.0422395 | chr16:0883 | 0.0422395 |
| C10orf137 | 3196 | chr10 | 127392756 | 127400524 | 0.0423054 | chr10:1273 | 0.0423054 |
| RRAS | 3201 | chr19 | 54831763 | 54835004 | 0.0423289 | chr19:0548 | 0.0423289 |
| DUSP9 | 3203 | chrX | 152555695 | 152568963 | 0.0423423 | chrX:15256 | 0.0423423 |
| REST | 3205 | chr4 | 57463475 | 57471232 | 0.042355 | chr4:05747 | 0.042355 |
| LOC387856 | 3207 | chr12 | 46858167 | 46866154 | 0.0423593 | chr12:0468 | 0.0423593 |
| HCN3 | 3209 | chr1 | 153514143 | 153516316 | 0.0423622 | chr1:15351 | 0.0423622 |
| FHOD1 | 3213 | chr16 | 65821001 | 65838901 | 0.0423724 | chr16:0658 | 0.0423724 |
| LOC284296 | 3216 | chr19 | 60633565 | 60641573 | 0.0423837 | chr19:0606 | 0.0423837 |
| FERD3L | 3220 | chr7 | 19149344 | 19155791 | 0.0424064 | chr7:01915 | 0.0424064 |
| HEL308 | 3221 | chr4 | 84590783 | 84595932 | 0.0424136 | chr4:08459 | 0.0424136 |
| MDH1B | 3222 | chr2 | 207334107 | 207338254 | 0.0424195 | chr2:20733 | 0.0424195 |
| LRRC8A | 3226 | chr9 | 130684369 | 130720081 | 0.0424528 | chr9:13071 | 0.0424528 |
| FLOT1 | 3228 | chr6 | 30815927 | 30818841 | 0.042465 | chr6:03081 | 0.042465 |
| SCMH1 | 3229 | chr1 | 41265692 | 41399749 | 0.0424671 | chr1:04126 | 0.0424671 |
| C9orf79 | 3230 | chr9 | 89682170 | 89689957 | 0.0424709 | chr9:08968 | 0.0424709 |
| FAM65A | 3233 | chr16 | 66114978 | 66122607 | 0.0424821 | chr16:0661 | 0.0424821 |
| SRD5A2 | 3235 | chr2 | 31657148 | 31661640 | 0.0424835 | chr2:03165 | 0.0424835 |
| WDFY2 | 3240 | chr13 | 51053213 | 51059345 | 0.042515 | chr13:0510 | 0.042515 |
| PLEKHG6 | 3241 | chr12 | 6284705 | 6292321 | 0.0425212 | chr12:0062 | 0.0425212 |
| CUL7 | 3242 | chr6 | 43127185 | 43129696 | 0.0425217 | chr6:04312 | 0.0425217 |
| MAPK3 | 3243 | chr16 | 30032905 | 30047092 | 0.042531 | chr16:0300 | 0.042531 |
| AARSD1 | 3244 | chr17 | 38382449 | 38385554 | 0.0425359 | chr17:0383 | 0.0425359 |
| ATP2B4 | 3247 | chr1 | 201857011 | 201921366 | 0.0425389 | chr1:20186 | 0.0425389 |
| SMTN | 3250 | chr22 | 29805170 | 29815053 | 0.042543 | chr22:0298 | 0.042543 |
| SMOX | 3253 | chr20 | 4075554 | 4102824 | 0.0425625 | chr20:0041 | 0.0425625 |
| C9orf142 | 3257 | chr9 | 139001532 | 139008383 | 0.0425755 | chr9:13900 | 0.0425755 |
| MUS81 | 3258 | chr11 | 65384557 | 65387844 | 0.0425907 | chr11:0653 | 0.0425907 |
| TBX21 | 3264 | chr17 | 43160178 | 43168235 | 0.0426197 | chr17:0431 | 0.0426197 |
| PHLDB3 | 3273 | chr19 | 48697595 | 48701294 | 0.0426547 | chr19:0487 | 0.0426547 |
| PTP4A1 | 3274 | chr6 | 64336681 | 64342880 | 0.0426554 | chr6:06434 | 0.0426554 |
| TSTA3 | 3277 | chr8 | 144765937 | 144771639 | 0.0426578 | chr8:14476 | 0.0426578 |
| NDUFB11 | 3282 | chrX | 46884164 | 46889401 | 0.042712 | chrX:04688 | 0.042712 |
| CYP20A1 | 3284 | chr2 | 203806228 | 203813307 | 0.0427212 | chr2:20381 | 0.0427212 |
| MGC2752 | 3285 | chr19 | 63778822 | 63781983 | 0.0427258 | chr19:0637 | 0.0427258 |
| KCNA1 | 3290 | chr12 | 4886076 | 4893192 | 0.0427666 | chr12:0048 | 0.0427666 |
| TCEA3 | 3293 | chr1 | 23621482 | 23629328 | 0.0427823 | chr1:02362 | 0.0427823 |
| PROCA1 | 3294 | chr17 | 24061186 | 24065416 | 0.0427867 | chr17:0240 | 0.0427867 |
| ADM | 3295 | chr11 | 10282307 | 10286169 | 0.0427953 | chr11:0102 | 0.0427953 |
| SURF5 | 3303 | chr9 | 135197580 | 135204485 | 0.0428362 | chr9:13519 | 0.0428362 |
| RIBC2 | 3305 | chr22 | 44188229 | 44193216 | 0.0428365 | chr22:0441 | 0.0428365 |
| ZIC3 | 3308 | chrX | 136470489 | 136479034 | 0.042841 | chrX:13647 | 0.042841 |
| KREMEN2 | 3326 | chr16 | 2949358 | 2958383 | 0.0429283 | chr16:0029 | 0.0429283 |
| ACN9 | 3328 | chr7 | 96580072 | 96586631 | 0.0429367 | chr7:09658 | 0.0429367 |

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| DLX2 | 3329 | chr2 | 172673176 | 172681169 | 0.0429374 | chr2:17267 | 0.0429374 |
| CARD10 | 3330 | chr22 | 36216341 | 36250515 | 0.0429433 | chr22:0362 | 0.0429433 |
| SPON1 | 3334 | chr11 | 13935342 | 13942972 | 0.0429549 | chr11:0139 | 0.0429549 |
| PTPRB | 3336 | chr12 | 69287418 | 69295342 | 0.0429612 | chr12:0692 | 0.0429612 |
| UPK1B | 3338 | chr3 | 120372211 | 120390711 | 0.0429755 | chr3:12039 | 0.0429755 |
| ACTN3 | 3341 | chr11 | 66070955 | 66075639 | 0.0429889 | chr11:0660 | 0.0429889 |
| GNL3L | 3352 | chrX | 54570373 | 54575761 | 0.0430718 | chrX:0545 | 0.0430718 |
| PPP1R1B | 3358 | chr17 | 35031316 | 35046184 | 0.0431065 | chr17:0350 | 0.0431065 |
| C2 | 3359 | chr6 | 31998012 | 32021428 | 0.0431068 | chr6:03201 | 0.0431068 |
| FCMD | 3361 | chr9 | 107354931 | 107362211 | 0.0431191 | chr9:10736 | 0.0431191 |
| CD300C | 3363 | chr17 | 70051108 | 70059308 | 0.0431355 | chr17:0700 | 0.0431355 |
| GSC | 3367 | chr14 | 94303729 | 94311646 | 0.0431552 | chr14:0943 | 0.0431552 |
| GGCX | 3369 | chr2 | 85639687 | 85643381 | 0.0431567 | chr2:0856 | 0.0431567 |
| SLC25A11 | 3370 | chr17 | 4780220 | 4784050 | 0.0431572 | chr17:0047 | 0.0431572 |
| FES | 3371 | chr15 | 89227772 | 89231729 | 0.0431597 | chr15:0892 | 0.0431597 |
| ACTL7B | 3376 | chr9 | 110656297 | 110657914 | 0.0431863 | chr9:11065 | 0.0431863 |
| FZD1 | 3379 | chr7 | 90726192 | 90734634 | 0.0432015 | chr7:09073 | 0.0432015 |
| LY6E | 3381 | chr8 | 144166141 | 144173816 | 0.043225 | chr8:14417 | 0.043225 |
| LOC338328 | 3383 | chr8 | 144361008 | 144368897 | 0.0432349 | chr8:14436 | 0.0432349 |
| SOX3 | 3388 | chrX | 139412492 | 139420461 | 0.0432597 | chrX:1394 | 0.0432597 |
| PACSIN3 | 3390 | chr11 | 47155730 | 47167463 | 0.0432652 | chr11:0471 | 0.0432652 |
| PJA2 | 3395 | chr5 | 108771288 | 108774994 | 0.0433077 | chr5:10877 | 0.0433077 |
| PNPLA2 | 3397 | chr11 | 803447 | 814926 | 0.0433167 | chr11:0008 | 0.0433167 |
| NKX2-2 | 3400 | chr20 | 21439947 | 21448143 | 0.0433368 | chr20:0214 | 0.0433368 |
| EPS8L1 | 3403 | chr19 | 60275210 | 60286135 | 0.0433453 | chr19:0602 | 0.0433453 |
| ATAD2 | 3404 | chr8 | 124476273 | 124483228 | 0.0433479 | chr8:12447 | 0.0433479 |
| C12orf34 | 3411 | chr12 | 108651602 | 108666963 | 0.0433732 | chr12:1086 | 0.0433732 |
| FGF18 | 3416 | chr5 | 170775024 | 170782303 | 0.0433817 | chr5:17078 | 0.0433817 |
| SLC4A2 | 3417 | chr7 | 150388026 | 150392892 | 0.0433851 | chr7:15039 | 0.0433851 |
| INPP5D | 3426 | chr2 | 233627895 | 233736812 | 0.0434264 | chr2:23373 | 0.0434264 |
| EFCAB4A | 3428 | chr11 | 815227 | 821973 | 0.0434318 | chr11:0008 | 0.0434318 |
| DLX1 | 3446 | chr2 | 172653920 | 172661227 | 0.0435058 | chr2:17265 | 0.0435058 |
| ZFYVE26 | 3451 | chr14 | 67349984 | 67353063 | 0.0435305 | chr14:0673 | 0.0435305 |
| RPUSD1 | 3452 | chr16 | 775023 | 778378 | 0.0435313 | chr16:0007 | 0.0435313 |
| GPR101 | 3455 | chrX | 135938997 | 135947021 | 0.0435696 | chrX:1359 | 0.0435696 |
| APPBP2 | 3457 | chr17 | 55956223 | 55960924 | 0.0435834 | chr17:0559 | 0.0435834 |
| TSPAN7 | 3458 | chrX | 38300535 | 38307978 | 0.0435872 | chrX:0383 | 0.0435872 |
| CABLES2 | 3460 | chr20 | 60397052 | 60418565 | 0.0435954 | chr20:0604 | 0.0435954 |
| SEPT3 | 3468 | chr22 | 40697485 | 40724167 | 0.0436612 | chr22:0407 | 0.0436612 |
| PCDH17 | 3473 | chr13 | 57098780 | 57107111 | 0.043671 | chr13:0571 | 0.043671 |
| USP46 | 3476 | chr4 | 53218209 | 53222549 | 0.0436937 | chr4:05321 | 0.0436937 |
| ALDOA | 3477 | chr16 | 29968219 | 29986571 | 0.0436959 | chr16:0299 | 0.0436959 |
| LRRIQ2 | 3480 | chr3 | 102921858 | 102928508 | 0.0437004 | chr3:10292 | 0.0437004 |
| PMPCA | 3481 | chr9 | 138425057 | 138429885 | 0.0437009 | chr9:13842 | 0.0437009 |
| UPF1 | 3482 | chr19 | 18799619 | 18806398 | 0.0437151 | chr19:0188 | 0.0437151 |
| RIN1 | 3483 | chr11 | 65858046 | 65861291 | 0.0437156 | chr11:0658 | 0.0437156 |
| THAP11 | 3487 | chr16 | 66433992 | 66435553 | 0.0437294 | chr16:0664 | 0.0437294 |
| GPI | 3489 | chr19 | 39542280 | 39583015 | 0.0437335 | chr19:0395 | 0.0437335 |
| SYMPK | 3514 | chr19 | 51010517 | 51058211 | 0.0438624 | chr19:0510 | 0.0438624 |
| PRPF38B | 3517 | chr1 | 109030962 | 109039191 | 0.043868 | chr1:10903 | 0.043868 |
| LRRC45 | 3520 | chr17 | 77574556 | 77582263 | 0.0438808 | chr17:0775 | 0.0438808 |
| MGC33302 | 3525 | chr4 | 129105909 | 129111971 | 0.0439239 | chr4:12910 | 0.0439239 |
| PIK3R2 | 3530 | chr19 | 18119524 | 18141600 | 0.043964 | chr19:0181 | 0.043964 |
| ACTC1 | 3531 | chr15 | 32872072 | 32880487 | 0.0439671 | chr15:0328 | 0.0439671 |
| C20orf117 | 3533 | chr20 | 34854482 | 34927899 | 0.0439759 | chr20:0348 | 0.0439759 |
| FAM122A | 3536 | chr9 | 70580855 | 70587325 | 0.0439873 | chr9:07058 | 0.0439873 |
| ARL9 | 3542 | chr4 | 57064774 | 57068095 | 0.0440093 | chr4:05706 | 0.0440093 |
| WDR44 | 3544 | chrX | 117358587 | 117367001 | 0.0440223 | chrX:11736 | 0.0440223 |

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| AANAT | 3546 | chr17 | 71970905 | 71977775 | 0.0440338 | chr17:07197 | 0.0440338 |
| CD164 | 3554 | chr6 | 109807871 | 109815857 | 0.0440848 | chr6:10981( | 0.0440848 |
| OSBP2 | 3556 | chr22 | 29417488 | 29423181 | 0.0441037 | chr22:02942 | 0.0441037 |
| SCN4A | 3560 | chr17 | 59402130 | 59406297 | 0.0441243 | chr17:0594( | 0.0441243 |
| C5orf33 | 3561 | chr5 | 36275222 | 36283408 | 0.0441263 | chr5:036277 | 0.0441263 |
| STK10 | 3566 | chr5 | 171545383 | 171549272 | 0.0441379 | chr5:171547 | 0.0441379 |
| PBX2 | 3570 | chr6 | 32261265 | 32266350 | 0.0441479 | chr6:032264 | 0.0441479 |
| EDG5 | 3577 | chr19 | 10194107 | 10208306 | 0.0441819 | chr19:0101( | 0.0441819 |
| HAS3 | 3578 | chr16 | 67692297 | 67701284 | 0.0441979 | chr16:0676( | 0.0441979 |
| NCOA5 | 3590 | chr20 | 44149901 | 44156156 | 0.0442977 | chr20:0441( | 0.0442977 |
| STS-1 | 3600 | chr11 | 122027638 | 122033819 | 0.0443358 | chr11:12203 | 0.0443358 |
| CCDC131 | 3601 | chr12 | 70338753 | 70343888 | 0.0443477 | chr12:07034 | 0.0443477 |
| PDZD4 | 3602 | chrX | 152746540 | 152754349 | 0.0443503 | chrX:15274' | 0.0443503 |
| IL20 | 3604 | chr1 | 205100038 | 205107757 | 0.0443619 | chr1:20510( | 0.0443619 |
| PRMT1 | 3608 | chr19 | 54869138 | 54883507 | 0.0443811 | chr19:0548( | 0.0443811 |
| NPLOC4 | 3615 | chr17 | 77212816 | 77214251 | 0.0444041 | chr17:0772' | 0.0444041 |
| PALM | 3616 | chr19 | 658897 | 699273 | 0.0444052 | chr19:0006( | 0.0444052 |
| MTF1 | 3624 | chr1 | 38047831 | 38103067 | 0.04443 | chr1:038097 | 0.04443 |
| FAM78B | 3627 | chr1 | 164399719 | 164408034 | 0.0444469 | chr1:16440' | 0.0444469 |
| ELF4 | 3636 | chrX | 129040770 | 129077714 | 0.04449 | chrX:12907' | 0.04449 |
| WNT9B | 3641 | chr17 | 42278484 | 42286526 | 0.0444984 | chr17:04228 | 0.0444984 |
| TMEM30B | 3644 | chr14 | 60815349 | 60822819 | 0.0445111 | chr14:0608' | 0.0445111 |
| DOK4 | 3659 | chr16 | 56068463 | 56079291 | 0.0445865 | chr16:0560( | 0.0445865 |
| PTPLAD1 | 3661 | chr15 | 63607919 | 63612343 | 0.0446062 | chr15:0636( | 0.0446062 |
| ADCK5 | 3663 | chr8 | 145566526 | 145571000 | 0.0446187 | chr8:14556( | 0.0446187 |
| PAFAH1B2 | 3667 | chr11 | 116514762 | 116530294 | 0.044653 | chr11:11652 | 0.044653 |
| EGR4 | 3670 | chr2 | 73371450 | 73379052 | 0.0446562 | chr2:07337' | 0.0446562 |
| OGFOD2 | 3672 | chr12 | 122025282 | 122025535 | 0.0446657 | chr12:12202 | 0.0446657 |
| DMPK | 3675 | chr19 | 50964878 | 50978054 | 0.0446756 | chr19:0509( | 0.0446756 |
| SLC25A4 | 3676 | chr4 | 186295964 | 186303878 | 0.0446902 | chr4:18630( | 0.0446902 |
| TAL1 | 3681 | chr1 | 47465527 | 47473471 | 0.0447088 | chr1:047467 | 0.0447088 |
| TMEM123 | 3684 | chr11 | 101826452 | 101834283 | 0.0447314 | chr11:10182 | 0.0447314 |
| PAFAH2 | 3704 | chr1 | 26194652 | 26201806 | 0.0448114 | chr1:026196 | 0.0448114 |
| EGFL7 | 3708 | chr9 | 138671712 | 138687187 | 0.044826 | chr9:13868( | 0.044826 |
| ARHGEF17 | 3713 | chr11 | 72691799 | 72699744 | 0.0448454 | chr11:07269 | 0.0448454 |
| PDCL | 3722 | chr9 | 124628529 | 124636136 | 0.0448845 | chr9:12463( | 0.0448845 |
| SRPRB | 3724 | chr3 | 135001887 | 135009608 | 0.0449065 | chr3:13500( | 0.0449065 |
| NR4A1 | 3730 | chr12 | 50719389 | 50733857 | 0.0449579 | chr12:0507( | 0.0449579 |
| FLJ40172 | 3732 | chr2 | 47233504 | 47240742 | 0.0449664 | chr2:04723( | 0.0449664 |
| C19orf36 | 3734 | chr19 | 2048014 | 2051309 | 0.0449732 | chr19:0020( | 0.0449732 |
| CBFA2T3 | 3755 | chr16 | 87532609 | 87576499 | 0.0450973 | chr16:0875( | 0.0450973 |
| NT5C | 3756 | chr17 | 70638035 | 70643273 | 0.0451319 | chr17:0706( | 0.0451319 |
| OSBPL8 | 3758 | chr12 | 75270110 | 75481730 | 0.0451482 | chr12:0754( | 0.0451482 |
| C5AR1 | 3762 | chr19 | 52500333 | 52507095 | 0.04516 | chr19:0525( | 0.04516 |
| IKBKAP | 3768 | chr9 | 110730856 | 110736226 | 0.045199 | chr9:110735 | 0.045199 |
| LRRC62 | 3771 | chr22 | 36099070 | 36106869 | 0.0452043 | chr22:0360( | 0.0452043 |
| MAPK8IP2 | 3774 | chr22 | 49382084 | 49390817 | 0.0452092 | chr22:0493( | 0.0452092 |
| PKIB | 3775 | chr6 | 122834810 | 123083002 | 0.0452123 | chr6:12297( | 0.0452123 |
| BOP1 | 3780 | chr8 | 145480789 | 145485931 | 0.0452393 | chr8:14548' | 0.0452393 |
| SLC4A3 | 3781 | chr2 | 220195054 | 220203335 | 0.0452433 | chr2:22020( | 0.0452433 |
| SLC35F3 | 3784 | chr1 | 232106428 | 232419042 | 0.0452536 | chr1:23241( | 0.0452536 |
| ZNF396 | 3797 | chr18 | 31205876 | 31216720 | 0.045328 | chr18:0312' | 0.045328 |
| RASSF1 | 3802 | chr3 | 50342198 | 50353404 | 0.045347 | chr3:05034( | 0.045347 |
| COX5A | 3805 | chr15 | 73016345 | 73022669 | 0.0453628 | chr15:0730' | 0.0453628 |
| RASD1 | 3808 | chr17 | 17337933 | 17345592 | 0.0453768 | chr17:0173( | 0.0453768 |
| ITM2A | 3811 | chrX | 78506848 | 78514925 | 0.0453929 | chrX:07850( | 0.0453929 |
| SMARCA2 | 3816 | chr9 | 2001109 | 2007822 | 0.0454196 | chr9:00200( | 0.0454196 |
| ZNF800 | 3825 | chr7 | 126817524 | 126823397 | 0.0454845 | chr7:12681( | 0.0454845 |

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|---|---|---|---|---|---|---|---|
| NCAPG | 3826 | chr4 | 17421660 | 17426660 | 0.0454847 | chr4:01742 | 0.0454847 |
| HTF9C | 3836 | chr22 | 18479650 | 18484658 | 0.0455251 | chr22:0184 | 0.0455251 |
| SDC4 | 3839 | chr20 | 43408044 | 43412063 | 0.0455613 | chr20:0434 | 0.0455613 |
| COL20A1 | 3841 | chr20 | 61391741 | 61397505 | 0.0455731 | chr20:0613 | 0.0455731 |
| MAPBPIP | 3847 | chr1 | 154291265 | 154294830 | 0.0456088 | chr1:15429 | 0.0456088 |
| GBGT1 | 3857 | chr9 | 135026759 | 135033505 | 0.0456569 | chr9:13502 | 0.0456569 |
| C15orf39 | 3859 | chr15 | 73276730 | 73290520 | 0.0456711 | chr15:0732 | 0.0456711 |
| ERCC2 | 3863 | chr19 | 50563705 | 50565940 | 0.0456822 | chr19:0505 | 0.0456822 |
| LAMA4 | 3865 | chr6 | 112679622 | 112687624 | 0.0456878 | chr6:11268 | 0.0456878 |
| KCNE1L | 3872 | chrX | 108752457 | 108760415 | 0.045717 | chrX:10875 | 0.045717 |
| C20orf100 | 3873 | chr20 | 41973141 | 42037400 | 0.0457298 | chr20:0420 | 0.0457298 |
| SEMA3G | 3874 | chr3 | 52451603 | 52459936 | 0.0457422 | chr3:05245 | 0.0457422 |
| CXorf40A | 3877 | chrX | 148428970 | 148431630 | 0.045756 | chrX:14843 | 0.045756 |
| METT11D1 | 3882 | chr14 | 20522447 | 20534923 | 0.0457688 | chr14:0205 | 0.0457688 |
| IPO4 | 3886 | chr14 | 23725643 | 23728166 | 0.045784 | chr14:0237 | 0.045784 |
| TM2D2 | 3887 | chr8 | 38969251 | 38973119 | 0.0457915 | chr8:03897 | 0.0457915 |
| FLJ21687 | 3889 | chrX | 48903558 | 48911060 | 0.0458001 | chrX:04891 | 0.0458001 |
| LDOC1L | 3890 | chr22 | 43270363 | 43277527 | 0.0458237 | chr22:0432 | 0.0458237 |
| ZBED5 | 3891 | chr11 | 10833809 | 10841293 | 0.0458238 | chr11:0108 | 0.0458238 |
| JRK | 3893 | chr8 | 143742636 | 143748838 | 0.0458416 | chr8:14374 | 0.0458416 |
| SORT1 | 3894 | chr1 | 109653762 | 109746021 | 0.0458424 | chr1:10974 | 0.0458424 |
| APOE | 3897 | chr19 | 50098800 | 50104502 | 0.0458555 | chr19:0501 | 0.0458555 |
| TIMP2 | 3901 | chr17 | 74430803 | 74438320 | 0.0458778 | chr17:0744 | 0.0458778 |
| AIM1 | 3913 | chr6 | 107061575 | 107069436 | 0.0459398 | chr6:10706 | 0.0459398 |
| FGD1 | 3914 | chrX | 54536071 | 54543320 | 0.0459421 | chrX:05453 | 0.0459421 |
| CENTB1 | 3915 | chr17 | 7180576 | 7195539 | 0.045944 | chr17:0071 | 0.045944 |
| SYP | 3922 | chrX | 48931344 | 48948485 | 0.046016 | chrX:04893 | 0.046016 |
| PRAME | 3924 | chr22 | 21229221 | 21237247 | 0.0460204 | chr22:0212 | 0.0460204 |
| WDR13 | 3925 | chrX | 48335734 | 48343850 | 0.0460232 | chrX:04834 | 0.0460232 |
| PRKCG | 3934 | chr19 | 59072276 | 59102525 | 0.0460442 | chr19:0590 | 0.0460442 |
| SEC14L3 | 3935 | chr22 | 29195482 | 29203480 | 0.0460466 | chr22:0291 | 0.0460466 |
| BCL6B | 3937 | chr17 | 6867076 | 6869593 | 0.0460523 | chr17:0068 | 0.0460523 |
| SLC7A4 | 3941 | chr22 | 19713809 | 19718296 | 0.0460742 | chr22:0197 | 0.0460742 |
| NXPH1 | 3944 | chr7 | 8434812 | 8443195 | 0.0460839 | chr7:00844 | 0.0460839 |
| FLJ10241 | 3945 | chr19 | 46629585 | 46642219 | 0.0460932 | chr19:0466 | 0.0460932 |
| DNASE2 | 3949 | chr19 | 12851323 | 12856181 | 0.0461073 | chr19:0128 | 0.0461073 |
| FLAD1 | 3958 | chr1 | 153218455 | 153232121 | 0.0461578 | chr1:15322 | 0.0461578 |
| PLA2G6 | 3960 | chr22 | 36837438 | 36911782 | 0.0461807 | chr22:0368 | 0.0461807 |
| MPV17 | 3961 | chr2 | 27385967 | 27402175 | 0.0461869 | chr2:02738 | 0.0461869 |
| AIP | 3962 | chr11 | 67006608 | 67008226 | 0.0462006 | chr11:0670 | 0.0462006 |
| NR2E3 | 3968 | chr15 | 69884479 | 69892400 | 0.0462325 | chr15:0698 | 0.0462325 |
| NPEPL1 | 3969 | chr20 | 56697279 | 56703297 | 0.0462375 | chr20:0567 | 0.0462375 |
| CD7 | 3970 | chr17 | 77866184 | 77872130 | 0.0462568 | chr17:0778 | 0.0462568 |
| TDP1 | 3980 | chr14 | 89492034 | 89496221 | 0.0463211 | chr14:0894 | 0.0463211 |
| C8orf47 | 3983 | chr8 | 99141964 | 99148277 | 0.0463371 | chr8:09914 | 0.0463371 |
| POU3F1 | 3998 | chr1 | 38282500 | 38290467 | 0.046441 | chr1:03828 | 0.046441 |
| C19orf42 | 3999 | chr19 | 16623390 | 16631927 | 0.0464432 | chr19:0166 | 0.0464432 |
| HDAC3 | 4004 | chr5 | 140980623 | 140996500 | 0.0464758 | chr5:14099 | 0.0464758 |
| SAFB2 | 4011 | chr19 | 5568803 | 5573819 | 0.0465 | chr19:0055 | 0.0465 |
| EPHA8 | 4015 | chr1 | 22758170 | 22765175 | 0.046527 | chr1:02276 | 0.046527 |
| GRM2 | 4017 | chr3 | 51713356 | 51720481 | 0.0465318 | chr3:05172 | 0.0465318 |
| WEE1 | 4022 | chr11 | 9545533 | 9554304 | 0.046545 | chr11:0095 | 0.046545 |
| SLC6A19 | 4026 | chr5 | 1249407 | 1275023 | 0.0465623 | chr5:00125 | 0.0465623 |
| DKFZp434E | 4027 | chr1 | 199443135 | 199451617 | 0.0465625 | chr1:19944 | 0.0465625 |
| ANKFY1 | 4030 | chr17 | 4111657 | 4119439 | 0.046568 | chr17:0041 | 0.046568 |
| CD3EAP | 4031 | chr19 | 50601357 | 50604776 | 0.0465925 | chr19:0506 | 0.0465925 |
| PRM3 | 4040 | chr16 | 11274811 | 11276987 | 0.0466367 | chr16:0112 | 0.0466367 |
| APRT | 4041 | chr16 | 87403384 | 87407458 | 0.0466412 | chr16:0874 | 0.0466412 |

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|---|---|---|---|---|---|---|---|
| IGSF8 | 4042 | chr1 | 158327506 | 158340474 | 0.0466417 | chr1:15833 | 0.0466417 |
| PLA2G4B | 4044 | chr15 | 39907618 | 39909148 | 0.0466501 | chr15:0399 | 0.0466501 |
| BTG2 | 4050 | chr1 | 201535975 | 201543812 | 0.0466742 | chr1:20154 | 0.0466742 |
| SNX22 | 4051 | chr15 | 62225491 | 62233492 | 0.0466753 | chr15:0622 | 0.0466753 |
| STK16 | 4054 | chr2 | 219818432 | 219822470 | 0.0467098 | chr2:21981 | 0.0467098 |
| NAGS | 4059 | chr17 | 39437737 | 39442697 | 0.0467394 | chr17:0394 | 0.0467394 |
| TSGA10IP | 4061 | chr11 | 65467277 | 65484032 | 0.0467552 | chr11:0654 | 0.0467552 |
| FOXN2 | 4064 | chr2 | 48391972 | 48397723 | 0.0467679 | chr2:04839 | 0.0467679 |
| SPRY2 | 4068 | chr13 | 79810471 | 79818330 | 0.0467802 | chr13:0798 | 0.0467802 |
| IGFBP4 | 4069 | chr17 | 35849171 | 35855754 | 0.0467812 | chr17:0358 | 0.0467812 |
| BAD | 4074 | chr11 | 63807121 | 63808625 | 0.0467898 | chr11:0638 | 0.0467898 |
| PSMD7 | 4075 | chr16 | 72882735 | 72890653 | 0.0467923 | chr16:0728 | 0.0467923 |
| CTDSP2 | 4084 | chr12 | 56499970 | 56531883 | 0.0468363 | chr12:0565 | 0.0468363 |
| SLC25A5 | 4088 | chrX | 118483025 | 118488787 | 0.0468469 | chrX:11848 | 0.0468469 |
| ST3GAL2 | 4091 | chr16 | 68987801 | 69036007 | 0.0468505 | chr16:0690 | 0.0468505 |
| AASDH | 4095 | chr4 | 56946150 | 56951631 | 0.0468667 | chr4:05694 | 0.0468667 |
| SPRY4 | 4098 | chr5 | 141682269 | 141689857 | 0.0468855 | chr5:14168 | 0.0468855 |
| AMIGO3 | 4101 | chr3 | 49730014 | 49733959 | 0.0468891 | chr3:04973 | 0.0468891 |
| VPS24 | 4107 | chr2 | 86642404 | 86649094 | 0.046921 | chr2:08664 | 0.046921 |
| DKK2 | 4108 | chr4 | 108173845 | 108182374 | 0.0469247 | chr4:10817 | 0.0469247 |
| ETV6 | 4114 | chr12 | 11688534 | 11696775 | 0.0469505 | chr12:0116 | 0.0469505 |
| PLCB1 | 4126 | chr20 | 8055996 | 8063755 | 0.0470344 | chr20:0080 | 0.0470344 |
| PIAS4 | 4127 | chr19 | 3958112 | 3961279 | 0.0470401 | chr19:0039 | 0.0470401 |
| FSCN3 | 4134 | chr7 | 127019125 | 127023466 | 0.0470677 | chr7:12702 | 0.0470677 |
| GGA1 | 4138 | chr22 | 36329437 | 36337210 | 0.047076 | chr22:0363 | 0.047076 |
| PWP2 | 4139 | chr21 | 44350897 | 44375445 | 0.0470766 | chr21:0443 | 0.0470766 |
| CAMLG | 4141 | chr5 | 134096700 | 134104664 | 0.0470892 | chr5:13410 | 0.0470892 |
| NHS | 4142 | chrX | 17298164 | 17664013 | 0.0470916 | chrX:01730 | 0.0470916 |
| HIST1H2AK | 4146 | chr6 | 27914013 | 27914057 | 0.0471094 | chr6:02791 | 0.0471094 |
| SFRS8 | 4147 | chr12 | 130758351 | 130764225 | 0.0471106 | chr12:1307 | 0.0471106 |
| MCOLN1 | 4148 | chr19 | 7492128 | 7504699 | 0.0471107 | chr19:0074 | 0.0471107 |
| SFXN4 | 4152 | chr10 | 120912789 | 120917117 | 0.0471312 | chr10:1209 | 0.0471312 |
| LACE1 | 4153 | chr6 | 108718086 | 108725368 | 0.0471358 | chr6:10872 | 0.0471358 |
| ALKBH1 | 4158 | chr14 | 77240005 | 77244055 | 0.0471561 | chr14:0772 | 0.0471561 |
| EXTL1 | 4169 | chr1 | 26215612 | 26224231 | 0.0472534 | chr1:02622 | 0.0472534 |
| BTBD14B | 4176 | chr19 | 13090350 | 13109414 | 0.0472806 | chr19:0131 | 0.0472806 |
| TBL3 | 4179 | chr16 | 1959006 | 1968841 | 0.0472944 | chr16:0019 | 0.0472944 |
| C13orf26 | 4184 | chr13 | 30400134 | 30406546 | 0.0473154 | chr13:0304 | 0.0473154 |
| SLC32A1 | 4185 | chr20 | 36781070 | 36789284 | 0.0473173 | chr20:0367 | 0.0473173 |
| RCC2 | 4187 | chr1 | 17635192 | 17644246 | 0.0473327 | chr1:01763 | 0.0473327 |
| MFGE8 | 4188 | chr15 | 87243088 | 87263109 | 0.0473339 | chr15:0872 | 0.0473339 |
| PPRC1 | 4190 | chr10 | 103878979 | 103900079 | 0.0473431 | chr10:1038 | 0.0473431 |
| RPS19 | 4197 | chr19 | 47050330 | 47058845 | 0.0473781 | chr19:0470 | 0.0473781 |
| GRIN3A | 4198 | chr9 | 103537788 | 103546093 | 0.0473905 | chr9:10353 | 0.0473905 |
| GPR62 | 4204 | chr3 | 51959025 | 51966341 | 0.0474318 | chr3:05196 | 0.0474318 |
| RDHE2 | 4208 | chr8 | 57393419 | 57401248 | 0.047466 | chr8:05739 | 0.047466 |
| LBX1 | 4214 | chr10 | 102976163 | 102984172 | 0.0474921 | chr10:1029 | 0.0474921 |
| NTN1 | 4231 | chr17 | 8861707 | 8868877 | 0.047566 | chr17:0088 | 0.047566 |
| TFCP2L1 | 4233 | chr2 | 121756809 | 121763732 | 0.0475905 | chr2:12175 | 0.0475905 |
| FOSB | 4239 | chr19 | 50657902 | 50666176 | 0.0476095 | chr19:0506 | 0.0476095 |
| HPN | 4251 | chr19 | 40223272 | 40225552 | 0.0476665 | chr19:0402 | 0.0476665 |
| TMEM22 | 4257 | chr3 | 138016754 | 138022770 | 0.0476928 | chr3:13802 | 0.0476928 |
| MAP3K6 | 4259 | chr1 | 27563190 | 27566738 | 0.0476977 | chr1:02756 | 0.0476977 |
| INVS | 4260 | chr9 | 101901309 | 101906634 | 0.0477 | chr9:10190 | 0.0477 |
| ZNF337 | 4263 | chr20 | 25614039 | 25626215 | 0.0477203 | chr20:0256 | 0.0477203 |
| NAP1L2 | 4265 | chrX | 72348621 | 72355865 | 0.0477355 | chrX:0723 | 0.0477355 |
| LRRC40 | 4279 | chr1 | 70438832 | 70443834 | 0.0478269 | chr1:0704 | 0.0478269 |
| ACCN1 | 4280 | chr17 | 28640970 | 29512796 | 0.0478347 | chr17:0295 | 0.0478347 |

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|---|---|---|---|---|---|---|---|
| TRPV1 | 4286 | chr17 | 3440520 | 3452599 | 0.0478574 | chr17:00344 | 0.0478574 |
| JMJD3 | 4287 | chr17 | 7693641 | 7698686 | 0.0478678 | chr17:00769 | 0.0478678 |
| SLC25A43 | 4288 | chrX | 118411541 | 118419791 | 0.0478701 | chrX:118418 | 0.0478701 |
| FLJ44968 | 4289 | chr19 | 19500076 | 19509281 | 0.047876 | chr19:01950 | 0.047876 |
| CD160 | 4294 | chr1 | 144415741 | 144429086 | 0.0479016 | chr1:144425 | 0.0479016 |
| F2 | 4295 | chr11 | 46692191 | 46699119 | 0.0479024 | chr11:04669 | 0.0479024 |
| LMX1B | 4302 | chr9 | 128411620 | 128419067 | 0.047941 | chr9:128416 | 0.047941 |
| PPARBP | 4303 | chr17 | 34816437 | 34861723 | 0.0479446 | chr17:03486 | 0.0479446 |
| ARHGAP6 | 4311 | chrX | 11192157 | 11598952 | 0.0479661 | chrX:01159 | 0.0479661 |
| PSMA1 | 4312 | chr11 | 14483031 | 14621675 | 0.0479678 | chr11:01449 | 0.0479678 |
| GCK | 4324 | chr7 | 44150509 | 44196310 | 0.0480354 | chr7:044163 | 0.0480354 |
| FAM83B | 4330 | chr6 | 54814188 | 54821982 | 0.0480839 | chr6:054819 | 0.0480839 |
| LOH12CR1 | 4336 | chr12 | 12401432 | 12403999 | 0.0481347 | chr12:01240 | 0.0481347 |
| GPATCH3 | 4338 | chr1 | 27089570 | 27102506 | 0.0481384 | chr1:027099 | 0.0481384 |
| C1orf65 | 4339 | chr1 | 221628312 | 221635422 | 0.0481397 | chr1:221634 | 0.0481397 |
| CX3CL1 | 4340 | chr16 | 55958514 | 55966040 | 0.0481416 | chr16:05596 | 0.0481416 |
| TMEM102 | 4348 | chr17 | 7271854 | 7281693 | 0.0481925 | chr17:00728 | 0.0481925 |
| OTEX | 4352 | chrX | 119133198 | 119139307 | 0.0482001 | chrX:11913 | 0.0482001 |
| MMACHC | 4353 | chr1 | 45738634 | 45740052 | 0.0482021 | chr1:045738 | 0.0482021 |
| LILRB5 | 4354 | chr19 | 59450518 | 59454621 | 0.0482032 | chr19:05945 | 0.0482032 |
| PARD6A | 4357 | chr16 | 66252473 | 66254203 | 0.0482114 | chr16:06625 | 0.0482114 |
| MRPS25 | 4372 | chr3 | 15079807 | 15086522 | 0.0482822 | chr3:015081 | 0.0482822 |
| RASSF7 | 4373 | chr11 | 551478 | 555967 | 0.0482871 | chr11:00055 | 0.0482871 |
| SNCG | 4374 | chr10 | 88708416 | 88712991 | 0.0483108 | chr10:08870 | 0.0483108 |
| PHF7 | 4377 | chr3 | 52419757 | 52424127 | 0.0483468 | chr3:052419 | 0.0483468 |
| TTYH2 | 4381 | chr17 | 69717995 | 69723577 | 0.0483603 | chr17:06972 | 0.0483603 |
| KCNQ1 | 4384 | chr11 | 2418278 | 2441724 | 0.048372 | chr11:00242 | 0.048372 |
| C19orf46 | 4386 | chr19 | 41189092 | 41191663 | 0.0483941 | chr19:04119 | 0.0483941 |
| MRPS12 | 4397 | chr19 | 44108771 | 44117567 | 0.0484539 | chr19:04411 | 0.0484539 |
| PRSS8 | 4403 | chr16 | 31051993 | 31057770 | 0.0484878 | chr16:03105 | 0.0484878 |
| LOC134145 | 4406 | chr5 | 10298144 | 10303009 | 0.04849 | chr5:010302 | 0.04849 |
| hsa-mir-93 | 4407 | chr7 | 99529350 | 99529395 | 0.0484944 | chr7:099529 | 0.0484944 |
| FAM19A2 | 4409 | chr12 | 60869557 | 60878276 | 0.0485025 | chr12:06087 | 0.0485025 |
| ATP2B3 | 4424 | chrX | 152449379 | 152457372 | 0.0485919 | chrX:15245 | 0.0485919 |
| GJA4 | 4425 | chr1 | 35026050 | 35033432 | 0.0486112 | chr1:035032 | 0.0486112 |
| SNX21 | 4427 | chr20 | 43895973 | 43898183 | 0.0486287 | chr20:04389 | 0.0486287 |
| REV3L | 4440 | chr6 | 111909195 | 111916799 | 0.0487081 | chr6:111910 | 0.0487081 |
| GPR44 | 4446 | chr11 | 60375370 | 60381541 | 0.0487322 | chr11:06037 | 0.0487322 |
| TRIM63 | 4448 | chr1 | 26250422 | 26271403 | 0.0487368 | chr1:026266 | 0.0487368 |
| CBX8 | 4453 | chr17 | 75382945 | 75390683 | 0.0487539 | chr17:07538 | 0.0487539 |
| C21orf51 | 4470 | chr21 | 34665358 | 34672189 | 0.0488459 | chr21:03467 | 0.0488459 |
| ZNF263 | 4479 | chr16 | 3268212 | 3276323 | 0.048881 | chr16:00327 | 0.048881 |
| CHIT1 | 4481 | chr1 | 201462866 | 201469143 | 0.0488886 | chr1:201464 | 0.0488886 |
| ZNF143 | 4482 | chr11 | 9436263 | 9440361 | 0.0488954 | chr11:00943 | 0.0488954 |
| E4F1 | 4483 | chr16 | 2213562 | 2225749 | 0.0488984 | chr16:00222 | 0.0488984 |
| C10orf54 | 4486 | chr10 | 73200726 | 73208138 | 0.0489081 | chr10:07320 | 0.0489081 |
| RAB36 | 4489 | chr22 | 21817538 | 21837715 | 0.0489138 | chr22:02183 | 0.0489138 |
| PITPNC1 | 4490 | chr17 | 62803285 | 62806611 | 0.0489139 | chr17:06280 | 0.0489139 |
| FAM96A | 4492 | chr15 | 62169776 | 62173251 | 0.0489349 | chr15:06217 | 0.0489349 |
| PCOTH | 4494 | chr13 | 23359219 | 23361496 | 0.0489461 | chr13:02336 | 0.0489461 |
| RAB27A | 4495 | chr15 | 53347370 | 53372650 | 0.0489557 | chr15:05336 | 0.0489557 |
| EIF3S12 | 4506 | chr19 | 43801636 | 43803986 | 0.0490056 | chr19:04380 | 0.0490056 |
| LRRN5 | 4512 | chr1 | 202918671 | 202926645 | 0.0490443 | chr1:202919 | 0.0490443 |
| DENND1C | 4514 | chr19 | 6430577 | 6434452 | 0.0490578 | chr19:00643 | 0.0490578 |
| LAMA5 | 4517 | chr20 | 60373324 | 60381222 | 0.0491042 | chr20:06037 | 0.0491042 |
| NKX2-8 | 4518 | chr14 | 36118951 | 36126938 | 0.0491043 | chr14:03612 | 0.0491043 |
| CLOCK | 4520 | chr4 | 56104367 | 56111169 | 0.0491124 | chr4:056107 | 0.0491124 |
| ZNF671 | 4543 | chr19 | 62913246 | 62932198 | 0.0491968 | chr19:06293 | 0.0491968 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| EFNA2 | 4547 | chr19 | 1231644 | 1239661 | 0.0492112 | chr19:00123 | 0.0492112 |
| ST6GALNA | 4554 | chr9 | 129716888 | 129722867 | 0.0492744 | chr9:129718 | 0.0492744 |
| F2RL1 | 4558 | chr5 | 76145860 | 76153141 | 0.0492981 | chr5:07615( | 0.0492981 |
| MAP2K3 | 4566 | chr17 | 21123467 | 21144813 | 0.0493351 | chr17:02114 | 0.0493351 |
| WNT5B | 4567 | chr12 | 1591088 | 1611110 | 0.0493353 | chr12:0016( | 0.0493353 |
| F12 | 4568 | chr5 | 176761724 | 176774597 | 0.0493408 | chr5:17676: | 0.0493408 |
| DHX15 | 4569 | chr4 | 24193001 | 24200376 | 0.0493417 | chr4:024195 | 0.0493417 |
| KCNJ12 | 4580 | chr17 | 21214876 | 21261693 | 0.0493953 | chr17:02122 | 0.0493953 |
| HEXA | 4581 | chr15 | 70452947 | 70455261 | 0.0494212 | chr15:0704: | 0.0494212 |
| FXYD2 | 4584 | chr11 | 117198245 | 117209396 | 0.0494383 | chr11:11719 | 0.0494383 |
| ARHGEF10 | 4588 | chr8 | 1754821 | 1796749 | 0.0494532 | chr8:001795 | 0.0494532 |
| TMEM35 | 4594 | chrX | 100219412 | 100237962 | 0.0494874 | chrX:10022( | 0.0494874 |
| TMEM153 | 4598 | chr22 | 49288063 | 49292916 | 0.0495157 | chr22:0492: | 0.0495157 |
| SLC39A13 | 4599 | chr11 | 47381440 | 47390647 | 0.0495188 | chr11:04738 | 0.0495188 |
| MAGEA8 | 4600 | chrX | 148768376 | 148773162 | 0.0495281 | chrX:14877 | 0.0495281 |
| FLJ40125 | 4601 | chr19 | 50693687 | 50697604 | 0.0495281 | chr19:0506: | 0.0495281 |
| RENBP | 4602 | chrX | 152854059 | 152866211 | 0.0495383 | chrX:15286: | 0.0495383 |
| LRIG1 | 4603 | chr3 | 66631073 | 66638960 | 0.0495442 | chr3:06663: | 0.0495442 |
| ACTL6B | 4604 | chr7 | 100078659 | 100095523 | 0.049545 | chr7:10007: | 0.049545 |
| MLLT6 | 4617 | chr17 | 34110972 | 34127757 | 0.0496117 | chr17:03411 | 0.0496117 |
| SFN | 4623 | chr1 | 27056848 | 27064535 | 0.0496362 | chr1:027063 | 0.0496362 |
| THEM2 | 4629 | chr6 | 24775250 | 24775977 | 0.0496521 | chr6:024775 | 0.0496521 |
| ZNF179 | 4630 | chr17 | 19249789 | 19257700 | 0.0496574 | chr17:01925 | 0.0496574 |
| FADS1 | 4644 | chr11 | 61338442 | 61342155 | 0.0497473 | chr11:06134 | 0.0497473 |
| C1orf86 | 4649 | chr1 | 2113597 | 2120913 | 0.0497583 | chr1:002114 | 0.0497583 |
| ABCA7 | 4653 | chr19 | 990193 | 1016573 | 0.0497943 | chr19:0009: | 0.0497943 |
| RABEP2 | 4656 | chr16 | 28842523 | 28843868 | 0.0498003 | chr16:0288: | 0.0498003 |
| KCNA7 | 4658 | chr19 | 54262884 | 54269202 | 0.0498055 | chr19:0542( | 0.0498055 |
| B4GALT5 | 4661 | chr20 | 47761142 | 47768485 | 0.049829 | chr20:0477( | 0.049829 |
| PLEKHH3 | 4679 | chr17 | 38079691 | 38084951 | 0.0499441 | chr17:0380: | 0.0499441 |
| EBP | 4680 | chrX | 48264120 | 48267498 | 0.0499665 | chrX:04826: | 0.0499665 |

**HPSE- bound genes (5'-transcribe region)** **ST subset (523 genes)**

| Gene | Rank (Hep- | Chromosor | Start | End | Min P(Xbar) | Probe | P(Xbar) |
|---|---|---|---|---|---|---|---|
| LRRTM1 | 232 | chr2 | 80382569 | 80390116 | 0.021949 | chr2:080383 | 0.021949 |
| TRIM36 | 238 | chr5 | 114541135 | 114546895 | 0.0220266 | chr5:114543 | 0.0220266 |
| FAM46B | 375 | chr1 | 27209325 | 27217520 | 0.0238813 | chr1:027211 | 0.0238813 |
| EPHB1 | 400 | chr3 | 135991644 | 135999601 | 0.0241175 | chr3:135997 | 0.0241175 |
| SHC3 | 491 | chr9 | 90980874 | 90988635 | 0.0252491 | chr9:090983 | 0.0252491 |
| ASAHL | 504 | chr4 | 77078818 | 77086156 | 0.0253931 | chr4:07708( | 0.0253931 |
| FAM83H | 614 | chr8 | 144880245 | 144888311 | 0.0264755 | chr8:14488: | 0.0264755 |
| ROR2 | 663 | chr9 | 93749647 | 93757679 | 0.0269234 | chr9:09375' | 0.0269234 |
| BXDC2 | 680 | chr5 | 34951668 | 34953885 | 0.0270891 | chr5:03495' | 0.0270891 |
| LOC40012( | 704 | chr13 | 36140652 | 36148421 | 0.0273137 | chr13:0361: | 0.0273137 |
| SLC39A10 | 718 | chr2 | 196224788 | 196232532 | 0.0274089 | chr2:19623( | 0.0274089 |
| MDS1 | 783 | chr3 | 170861701 | 170869536 | 0.0280181 | chr3:17086: | 0.0280181 |
| TAPBP | 789 | chr6 | 33375436 | 33389861 | 0.0281124 | chr6:033389 | 0.0281124 |
| ELOVL1 | 800 | chr1 | 43603838 | 43611809 | 0.0281593 | chr1:04360: | 0.0281593 |
| SNAG1 | 801 | chr5 | 53846310 | 53852014 | 0.0281637 | chr5:05385' | 0.0281637 |
| ALX3 | 809 | chr1 | 110412386 | 110419370 | 0.0282109 | chr1:110414 | 0.0282109 |
| CXCL14 | 854 | chr5 | 134940126 | 134947825 | 0.0285784 | chr5:13494: | 0.0285784 |
| ITGA6 | 887 | chr2 | 172995510 | 173002953 | 0.0288925 | chr2:17300( | 0.0288925 |
| ALPL | 888 | chr1 | 21703172 | 21710923 | 0.0288936 | chr1:02170: | 0.0288936 |
| FLJ16124 | 910 | chr2 | 65517380 | 65519335 | 0.0290196 | chr2:065517 | 0.0290196 |
| NEUROG2 | 925 | chr4 | 113653796 | 113662198 | 0.0291033 | chr4:11365( | 0.0291033 |
| CEI | 951 | chr5 | 2805337 | 2810273 | 0.029363 | chr5:00280: | 0.029363 |
| SFRP4 | 982 | chr7 | 37920191 | 37922886 | 0.0296663 | chr7:03792: | 0.0296663 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NR2E1 | 1015 | chr6 | 108588654 | 108597134 | 0.0298518 | chr6:10859 | 0.0298518 |
| C1orf188 | 1028 | chr1 | 6191529 | 6194612 | 0.0299748 | chr1:00619 | 0.0299748 |
| SNX24 | 1041 | chr5 | 122205841 | 122211447 | 0.0301252 | chr5:12220 | 0.0301252 |
| LOC441108 | 1052 | chr5 | 131769250 | 131777072 | 0.0302106 | chr5:13177 | 0.0302106 |
| SNX13 | 1065 | chr7 | 17944204 | 17950848 | 0.0302762 | chr7:01794 | 0.0302762 |
| MAP9 | 1074 | chr4 | 156515088 | 156521715 | 0.0303197 | chr4:15651 | 0.0303197 |
| PHOX2B | 1083 | chr4 | 41443145 | 41451222 | 0.0303905 | chr4:04144 | 0.0303905 |
| CCDC13 | 1108 | chr3 | 42788796 | 42795199 | 0.0305708 | chr3:04278 | 0.0305708 |
| TOX | 1114 | chr8 | 60191653 | 60199534 | 0.0306259 | chr8:06019 | 0.0306259 |
| MON1A | 1120 | chr3 | 49921450 | 49942365 | 0.0306802 | chr3:04994 | 0.0306802 |
| CDC14B | 1133 | chr9 | 98418988 | 98426656 | 0.0307582 | chr9:09842 | 0.0307582 |
| KLF14 | 1140 | chr7 | 130067142 | 130074866 | 0.0308372 | chr7:13006 | 0.0308372 |
| AZIN1 | 1147 | chr8 | 103943698 | 103951045 | 0.0308628 | chr8:10394 | 0.0308628 |
| CAPN2 | 1156 | chr1 | 221961730 | 221969016 | 0.0309067 | chr1:22196 | 0.0309067 |
| LNPEP | 1162 | chr5 | 96293610 | 96300037 | 0.0309522 | chr5:09629 | 0.0309522 |
| ZNF175 | 1172 | chr19 | 56760888 | 56768804 | 0.0310293 | chr19:0567 | 0.0310293 |
| ZNF16 | 1178 | chr8 | 146144543 | 146147452 | 0.0310759 | chr8:14614 | 0.0310759 |
| CAD | 1186 | chr2 | 27293596 | 27295646 | 0.0310981 | chr2:02729 | 0.0310981 |
| RPS6KA2 | 1188 | chr6 | 166957988 | 166965434 | 0.031121 | chr6:16696 | 0.031121 |
| RPL22 | 1201 | chr1 | 6167759 | 6182271 | 0.031188 | chr1:00618 | 0.031188 |
| UBE2R2 | 1211 | chr9 | 33804058 | 33810272 | 0.0312505 | chr9:03380 | 0.0312505 |
| RPP14 | 1238 | chr3 | 58263066 | 58268886 | 0.0313777 | chr3:05826 | 0.0313777 |
| EHD3 | 1260 | chr2 | 31305768 | 31313451 | 0.0315643 | chr2:03131 | 0.0315643 |
| MAT2B | 1263 | chr5 | 162857599 | 162867417 | 0.0315718 | chr5:16286 | 0.0315718 |
| GPR157 | 1280 | chr1 | 9109228 | 9117463 | 0.0316631 | chr1:00911 | 0.0316631 |
| DTNB | 1299 | chr2 | 25747846 | 25755087 | 0.0318152 | chr2:02574 | 0.0318152 |
| THAP1 | 1316 | chr8 | 42814869 | 42819716 | 0.0319373 | chr8:04281 | 0.0319373 |
| NFE2L3 | 1326 | chr7 | 26156183 | 26160646 | 0.0320323 | chr7:02615 | 0.0320323 |
| SDK1 | 1335 | chr7 | 3303060 | 3310184 | 0.0320594 | chr7:00330 | 0.0320594 |
| FLJ30851 | 1356 | chr2 | 24246095 | 24253493 | 0.0321821 | chr2:02425 | 0.0321821 |
| KIF17 | 1373 | chr1 | 20863325 | 20922058 | 0.0323322 | chr1:02086 | 0.0323322 |
| SMO | 1394 | chr7 | 128612040 | 128618618 | 0.0324623 | chr7:12861 | 0.0324623 |
| DST | 1406 | chr6 | 56613225 | 56821413 | 0.0325323 | chr6:05681 | 0.0325323 |
| CLDN7 | 1412 | chr17 | 7104168 | 7108275 | 0.0325547 | chr17:0071 | 0.0325547 |
| ATP5I | 1419 | chr4 | 655430 | 658039 | 0.0325971 | chr4:00065 | 0.0325971 |
| C10orf67 | 1420 | chr10 | 23671674 | 23678691 | 0.0326026 | chr10:0236 | 0.0326026 |
| SRP72 | 1428 | chr4 | 57024048 | 57064183 | 0.032664 | chr4:05702 | 0.032664 |
| C9orf86 | 1441 | chr9 | 138822209 | 138824798 | 0.0327485 | chr9:13882 | 0.0327485 |
| S100Z | 1444 | chr5 | 76177467 | 76184007 | 0.0327846 | chr5:07618 | 0.0327846 |
| DOCK4 | 1447 | chr7 | 111628448 | 111633719 | 0.0328365 | chr7:11163 | 0.0328365 |
| EIF2C1 | 1450 | chr1 | 36116657 | 36123824 | 0.0328461 | chr1:03612 | 0.0328461 |
| FAM123A | 1455 | chr13 | 24641462 | 24649894 | 0.0328733 | chr13:0246 | 0.0328733 |
| EVC | 1461 | chr4 | 5763852 | 5765461 | 0.0329512 | chr4:00576 | 0.0329512 |
| DNAJB2 | 1477 | chr2 | 219847033 | 219855288 | 0.0330745 | chr2:21985 | 0.0330745 |
| HINT3 | 1493 | chr6 | 126315510 | 126320839 | 0.0332018 | chr6:12631 | 0.0332018 |
| CIAO1 | 1497 | chr2 | 96295590 | 96300874 | 0.0332233 | chr2:09629 | 0.0332233 |
| ABCC5 | 1506 | chr3 | 185215949 | 185220813 | 0.0332735 | chr3:18521 | 0.0332735 |
| KCNN2 | 1560 | chr5 | 113720597 | 113799535 | 0.0336597 | chr5:11372 | 0.0336597 |
| MTX2 | 1609 | chr2 | 176837833 | 176844172 | 0.0339845 | chr2:17684 | 0.0339845 |
| D4ST1 | 1612 | chr15 | 38547780 | 38552984 | 0.0339991 | chr15:0385 | 0.0339991 |
| C1orf128 | 1619 | chr1 | 23975417 | 23987159 | 0.034019 | chr1:02397 | 0.034019 |
| URM1 | 1629 | chr9 | 130169818 | 130193777 | 0.0340462 | chr9:13017 | 0.0340462 |
| AR | 1636 | chrX | 66678205 | 66684194 | 0.0341003 | chrX:06668 | 0.0341003 |
| C7orf46 | 1640 | chr7 | 23683628 | 23688066 | 0.0341609 | chr7:02368 | 0.0341609 |
| RAXL1 | 1641 | chr19 | 3720389 | 3728669 | 0.0341634 | chr19:0037 | 0.0341634 |
| C19orf15 | 1649 | chr19 | 43513365 | 43553424 | 0.0342071 | chr19:0435 | 0.0342071 |
| SLC6A15 | 1656 | chr12 | 83828338 | 83834979 | 0.0342427 | chr12:0838 | 0.0342427 |
| GCC2 | 1674 | chr2 | 108427588 | 108434595 | 0.0343059 | chr2:10843 | 0.0343059 |

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|---|---|---|---|---|---|---|---|
| GTDC1 | 1680 | chr2 | 144804120 | 144811507 | 0.0343447 | chr2:14480 | 0.0343447 |
| CCT4 | 1693 | chr2 | 61967328 | 61974129 | 0.0344102 | chr2:06196 | 0.0344102 |
| CENTB5 | 1704 | chr1 | 1226824 | 1228503 | 0.0344928 | chr1:00122 | 0.0344928 |
| PTPRT | 1711 | chr20 | 41249397 | 41257020 | 0.0345341 | chr20:0412 | 0.0345341 |
| S100PBP | 1715 | chr1 | 33052949 | 33056053 | 0.0345456 | chr1:03305 | 0.0345456 |
| FGFR3 | 1717 | chr4 | 1760017 | 1767892 | 0.0345506 | chr4:00176 | 0.0345506 |
| KPNA1 | 1723 | chr3 | 123713882 | 123721542 | 0.0345612 | chr3:12371 | 0.0345612 |
| TULP1 | 1739 | chr6 | 35573749 | 35590147 | 0.0346663 | chr6:03558 | 0.0346663 |
| GGPS1 | 1740 | chr1 | 233558471 | 233563195 | 0.0346729 | chr1:23355 | 0.0346729 |
| ID1 | 1745 | chr20 | 29654081 | 29659368 | 0.0347073 | chr20:0296 | 0.0347073 |
| NFKBIZ | 1748 | chr3 | 103047860 | 103053598 | 0.0347426 | chr3:10305 | 0.0347426 |
| LOC113179 | 1754 | chr19 | 1856466 | 1858900 | 0.0347745 | chr19:0018 | 0.0347745 |
| FZD3 | 1772 | chr8 | 28407755 | 28410094 | 0.03488 | chr8:02840 | 0.03488 |
| RPL29 | 1776 | chr3 | 52002106 | 52009933 | 0.0349205 | chr3:05200 | 0.0349205 |
| LOC339344 | 1800 | chr19 | 51085104 | 51101026 | 0.0350765 | chr19:0510 | 0.0350765 |
| ATP6V1B2 | 1825 | chr8 | 20095526 | 20101391 | 0.0351768 | chr8:02009 | 0.0351768 |
| NOL8 | 1826 | chr9 | 94127630 | 94132765 | 0.0351844 | chr9:09412 | 0.0351844 |
| PIP5K3 | 1832 | chr2 | 208838159 | 208841399 | 0.0352413 | chr2:20883 | 0.0352413 |
| ESPL1 | 1833 | chr12 | 51943413 | 51973712 | 0.0352425 | chr12:0519 | 0.0352425 |
| DKFZP564( | 1834 | chr4 | 76073290 | 76079808 | 0.0352462 | chr4:07607 | 0.0352462 |
| C1orf85 | 1884 | chr1 | 154529559 | 154532626 | 0.0355135 | chr1:15453 | 0.0355135 |
| TCEB3 | 1887 | chr1 | 23937197 | 23944987 | 0.0355262 | chr1:02394 | 0.0355262 |
| MED11 | 1889 | chr17 | 4576070 | 4583524 | 0.0355286 | chr17:0045 | 0.0355286 |
| MCMDC1 | 1892 | chr6 | 119295655 | 119302139 | 0.0355454 | chr6:11929 | 0.0355454 |
| ANXA3 | 1895 | chr4 | 79689627 | 79696951 | 0.0355678 | chr4:07969 | 0.0355678 |
| IDI1 | 1917 | chr10 | 1083493 | 1085068 | 0.035678 | chr10:0010 | 0.035678 |
| GLB1L | 1920 | chr2 | 219813005 | 219818218 | 0.0356814 | chr2:21981 | 0.0356814 |
| SMG7 | 1922 | chr1 | 181703207 | 181710460 | 0.0356958 | chr1:18170 | 0.0356958 |
| RASIP1 | 1944 | chr19 | 53915827 | 53935838 | 0.0358538 | chr19:0539 | 0.0358538 |
| KCTD15 | 1953 | chr19 | 38974217 | 38982069 | 0.035932 | chr19:0389 | 0.035932 |
| ARC | 1955 | chr8 | 143690451 | 143698336 | 0.0359493 | chr8:14369 | 0.0359493 |
| C1orf198 | 1959 | chr1 | 229068380 | 229076882 | 0.0359678 | chr1:22907 | 0.0359678 |
| PDCD2 | 1971 | chr6 | 170733856 | 170738163 | 0.0360554 | chr6:17073 | 0.0360554 |
| SLC25A37 | 1987 | chr8 | 23436901 | 23444630 | 0.0361338 | chr8:02344 | 0.0361338 |
| CAMK2N2 | 1995 | chr3 | 185459741 | 185465847 | 0.0361663 | chr3:18546 | 0.0361663 |
| WDR60 | 2010 | chr7 | 158341323 | 158344029 | 0.0362723 | chr7:15834 | 0.0362723 |
| VTN | 2017 | chr17 | 23718606 | 23721445 | 0.0363128 | chr17:0237 | 0.0363128 |
| LSM6 | 2042 | chr4 | 147311475 | 147318709 | 0.0364501 | chr4:14731 | 0.0364501 |
| C14orf122 | 2052 | chr14 | 23678119 | 23682322 | 0.0365009 | chr14:0236 | 0.0365009 |
| FRMD3 | 2060 | chr9 | 85340731 | 85346965 | 0.0365466 | chr9:08534 | 0.0365466 |
| DNAJC11 | 2064 | chr1 | 6682188 | 6689973 | 0.0365528 | chr1:00668 | 0.0365528 |
| ZNHIT2 | 2078 | chr11 | 64640464 | 64644502 | 0.0366494 | chr11:0646 | 0.0366494 |
| PSPC1 | 2108 | chr13 | 19253577 | 19255983 | 0.0367905 | chr13:0192 | 0.0367905 |
| NDUFA6 | 2111 | chr22 | 40814878 | 40818501 | 0.0368228 | chr22:0408 | 0.0368228 |
| SLCO5A1 | 2125 | chr8 | 70907445 | 70913930 | 0.0368741 | chr8:07090 | 0.0368741 |
| SRRM2 | 2129 | chr16 | 2737401 | 2745128 | 0.0368911 | chr16:0027 | 0.0368911 |
| LHFPL3 | 2137 | chr7 | 103750837 | 103758824 | 0.03696 | chr7:10375 | 0.03696 |
| DENND1A | 2140 | chr9 | 125729943 | 125737263 | 0.0369749 | chr9:12573 | 0.0369749 |
| C5orf32 | 2152 | chr5 | 139530637 | 139537372 | 0.0370458 | chr5:13953 | 0.0370458 |
| BMI1 | 2154 | chr10 | 22649271 | 22652618 | 0.0370477 | chr10:0226 | 0.0370477 |
| WNT1 | 2158 | chr12 | 47658646 | 47661221 | 0.0370621 | chr12:0476 | 0.0370621 |
| RP2 | 2165 | chrX | 46576056 | 46583588 | 0.0370801 | chrX:04658 | 0.0370801 |
| C6orf211 | 2179 | chr6 | 151815222 | 151820303 | 0.0371809 | chr6:15181 | 0.0371809 |
| FLJ20323 | 2181 | chr7 | 7568276 | 7575450 | 0.0371843 | chr7:00757 | 0.0371843 |
| TCF12 | 2189 | chr15 | 54992977 | 55301407 | 0.0372232 | chr15:0549 | 0.0372232 |
| CNKSR3 | 2193 | chr6 | 154870710 | 154878944 | 0.0372433 | chr6:15487 | 0.0372433 |
| CHRNB2 | 2204 | chr1 | 152806892 | 152809656 | 0.0372939 | chr1:15280 | 0.0372939 |
| NEFM | 2209 | chr8 | 24821804 | 24829520 | 0.0373258 | chr8:02482 | 0.0373258 |

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|---|---|---|---|---|---|---|---|
| CYP7B1 | 2213 | chr8 | 65871307 | 65878966 | 0.0373363 | chr8:065873 | 0.0373363 |
| CCDC50 | 2223 | chr3 | 192526582 | 192532528 | 0.0374013 | chr3:19253( | 0.0374013 |
| CCDC17 | 2225 | chr1 | 45859749 | 45864065 | 0.0374041 | chr1:04586' | 0.0374041 |
| LTB | 2226 | chr6 | 31655812 | 31658095 | 0.0374119 | chr6:031656 | 0.0374119 |
| CKB | 2236 | chr14 | 103056222 | 103058750 | 0.037457 | chr14:10305 | 0.037457 |
| LOC339524 | 2240 | chr1 | 87365269 | 87372726 | 0.0374791 | chr1:08737( | 0.0374791 |
| C22orf13 | 2251 | chr22 | 23276416 | 23281255 | 0.0375321 | chr22:02328 | 0.0375321 |
| SOCS3 | 2256 | chr17 | 73864357 | 73873229 | 0.0375633 | chr17:07386 | 0.0375633 |
| PARP12 | 2268 | chr7 | 139406758 | 139410930 | 0.0376188 | chr7:139408 | 0.0376188 |
| ARL10 | 2279 | chr5 | 175725227 | 175726474 | 0.0376645 | chr5:175726 | 0.0376645 |
| FAM50B | 2285 | chr6 | 3789359 | 3796753 | 0.0377054 | chr6:00379- | 0.0377054 |
| K-ALPHA-1 | 2297 | chr12 | 47809235 | 47813511 | 0.037769 | chr12:0478' | 0.037769 |
| VAV3 | 2303 | chr1 | 108306682 | 108314153 | 0.0377961 | chr1:10830 | 0.0377961 |
| TNIP2 | 2316 | chr4 | 2725320 | 2733384 | 0.0378565 | chr4:002727 | 0.0378565 |
| GCC1 | 2321 | chr7 | 127009253 | 127012875 | 0.0378837 | chr7:127012 | 0.0378837 |
| TUBB2C | 2336 | chr9 | 139250952 | 139257939 | 0.0379577 | chr9:139256 | 0.0379577 |
| LRCH2 | 2345 | chrX | 114329687 | 114380386 | 0.0379911 | chrX:11433( | 0.0379911 |
| TSSK6 | 2349 | chr19 | 19482550 | 19487422 | 0.0380035 | chr19:01948 | 0.0380035 |
| DHFR | 2368 | chr5 | 79986198 | 79991602 | 0.038085 | chr5:079986 | 0.038085 |
| ABHD6 | 2372 | chr3 | 58193962 | 58200631 | 0.0380943 | chr3:05819 | 0.0380943 |
| EPB41L3 | 2374 | chr18 | 5531626 | 5539393 | 0.0381013 | chr18:00553 | 0.0381013 |
| C4orf20 | 2375 | chr4 | 186581838 | 186589531 | 0.0381015 | chr4:18658- | 0.0381015 |
| C4orf31 | 2386 | chr4 | 122210894 | 122218177 | 0.0381505 | chr4:122212 | 0.0381505 |
| C15orf17 | 2396 | chr15 | 72983931 | 72991052 | 0.0382154 | chr15:0729 | 0.0382154 |
| SYT7 | 2399 | chr11 | 61102413 | 61110335 | 0.0382331 | chr11:0611( | 0.0382331 |
| LLGL2 | 2401 | chr17 | 71032531 | 71053472 | 0.038235 | chr17:07103 | 0.038235 |
| TACSTD2 | 2404 | chr1 | 58813385 | 58820248 | 0.0382387 | chr1:05881- | 0.0382387 |
| GZF1 | 2405 | chr20 | 23289020 | 23295460 | 0.0382408 | chr20:0232 | 0.0382408 |
| NEK1 | 2406 | chr4 | 170768575 | 170770138 | 0.0382432 | chr4:17077( | 0.0382432 |
| C9orf100 | 2410 | chr9 | 35652750 | 35655224 | 0.0382694 | chr9:03565 | 0.0382694 |
| C6orf47 | 2412 | chr6 | 31734085 | 31737868 | 0.0382743 | chr6:03173 | 0.0382743 |
| NUFIP2 | 2414 | chr17 | 24642755 | 24649732 | 0.0382868 | chr17:0246- | 0.0382868 |
| RASL12 | 2423 | chr15 | 63144704 | 63152087 | 0.0383522 | chr15:0631- | 0.0383522 |
| GOLPH4 | 2437 | chr3 | 169293382 | 169301811 | 0.038434 | chr3:16929 | 0.038434 |
| TIMM13 | 2438 | chr19 | 2376621 | 2379072 | 0.0384381 | chr19:00237 | 0.0384381 |
| C1orf82 | 2446 | chr1 | 92537275 | 92542623 | 0.0384939 | chr1:092537 | 0.0384939 |
| PCM1 | 2448 | chr8 | 17819323 | 17827261 | 0.038508 | chr8:01782 | 0.038508 |
| SCGN | 2450 | chr6 | 25755942 | 25763092 | 0.0385133 | chr6:02576( | 0.0385133 |
| C3orf59 | 2458 | chr3 | 194115789 | 194124136 | 0.0385483 | chr3:19411 | 0.0385483 |
| TMEM121 | 2459 | chr14 | 105063470 | 105068670 | 0.0385561 | chr14:1050 | 0.0385561 |
| CALR | 2465 | chr19 | 12910545 | 12916025 | 0.0385991 | chr19:0129' | 0.0385991 |
| RMI1 | 2490 | chr9 | 85785570 | 85790315 | 0.0387105 | chr9:08578 | 0.0387105 |
| DUSP22 | 2507 | chr6 | 231621 | 240063 | 0.0387965 | chr6:00023 | 0.0387965 |
| MRPL41 | 2508 | chr9 | 139566147 | 139567819 | 0.0387997 | chr9:13956 | 0.0387997 |
| C8orf76 | 2517 | chr8 | 124320335 | 124326676 | 0.0388329 | chr8:12432 | 0.0388329 |
| RPL39L | 2518 | chr3 | 188338600 | 188342357 | 0.0388348 | chr3:18833 | 0.0388348 |
| IL13 | 2523 | chr5 | 132016926 | 132024236 | 0.0388508 | chr5:13202 | 0.0388508 |
| FLJ10159 | 2533 | chr6 | 107912957 | 107920935 | 0.038891 | chr6:10791 | 0.038891 |
| ST6GALNA | 2539 | chr9 | 129697952 | 129707064 | 0.038926 | chr9:12970( | 0.038926 |
| MKRN3 | 2545 | chr15 | 21356596 | 21364500 | 0.0389515 | chr15:0213 | 0.0389515 |
| PPFIBP1 | 2560 | chr12 | 27562866 | 27739309 | 0.0390569 | chr12:0275 | 0.0390569 |
| IRGQ | 2561 | chr19 | 48786988 | 48791274 | 0.03906 | chr19:0487 | 0.03906 |
| C7orf31 | 2563 | chr7 | 25183663 | 25191965 | 0.0390867 | chr7:025186 | 0.0390867 |
| NDUFA11 | 2564 | chr19 | 5850854 | 5855004 | 0.0390874 | chr19:0058 | 0.0390874 |
| ENDOG | 2574 | chr9 | 130620242 | 130623251 | 0.0391329 | chr9:13062' | 0.0391329 |
| ARVCF | 2575 | chr22 | 18382165 | 18384199 | 0.0391333 | chr22:0183 | 0.0391333 |
| B3GNT2 | 2578 | chr2 | 62274012 | 62279244 | 0.0391384 | chr2:06227 | 0.0391384 |
| ATXN7 | 2584 | chr3 | 63825281 | 63830003 | 0.0391656 | chr3:06382 | 0.0391656 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CDH2 | 2586 | chr18 | 24008571 | 24016616 | 0.0391789 | chr18:0240( | 0.0391789 |
| ZZEF1 | 2587 | chr17 | 3987805 | 3992946 | 0.0391841 | chr17:0039( | 0.0391841 |
| NCDN | 2590 | chr1 | 35796005 | 35800881 | 0.0391972 | chr1:03579( | 0.0391972 |
| DUS3L | 2592 | chr19 | 5736445 | 5746713 | 0.0392219 | chr19:0057( | 0.0392219 |
| ZCCHC17 | 2594 | chr1 | 31542566 | 31547335 | 0.0392474 | chr1:031542 | 0.0392474 |
| ARRDC2 | 2606 | chr19 | 17974459 | 17982508 | 0.0393433 | chr19:0179( | 0.0393433 |
| ADAM22 | 2609 | chr7 | 87400653 | 87403728 | 0.0393521 | chr7:087402 | 0.0393521 |
| ZNF232 | 2620 | chr17 | 4953356 | 4966865 | 0.0394237 | chr17:0049( | 0.0394237 |
| CYP4V2 | 2623 | chr4 | 187346175 | 187352436 | 0.03945 | chr4:18735( | 0.03945 |
| STXBP6 | 2632 | chr14 | 24586434 | 24594297 | 0.0395199 | chr14:0245( | 0.0395199 |
| SLC35A5 | 2654 | chr3 | 113763616 | 113765557 | 0.0396264 | chr3:113763 | 0.0396264 |
| NKTR | 2659 | chr3 | 42612261 | 42619948 | 0.0396469 | chr3:042617 | 0.0396469 |
| CA9 | 2660 | chr9 | 35664017 | 35666330 | 0.0396506 | chr9:03566( | 0.0396506 |
| ARPC1A | 2667 | chr7 | 98756782 | 98763511 | 0.0396784 | chr7:09876( | 0.0396784 |
| TMEM55A | 2669 | chr8 | 92119744 | 92125654 | 0.0397016 | chr8:09212( | 0.0397016 |
| ACTN2 | 2672 | chr1 | 234914383 | 234919038 | 0.0397088 | chr1:234916 | 0.0397088 |
| CBLN2 | 2675 | chr18 | 68359367 | 68368030 | 0.03972 | chr18:0683( | 0.03972 |
| GIPC2 | 2720 | chr1 | 78279081 | 78285802 | 0.0399202 | chr1:07828( | 0.0399202 |
| RNF151 | 2729 | chr16 | 1955320 | 1958819 | 0.0399675 | chr16:0019( | 0.0399675 |
| FLJ23577 | 2734 | chr5 | 35648848 | 35656216 | 0.0399795 | chr5:035653 | 0.0399795 |
| GADD45B | 2742 | chr19 | 2423856 | 2429726 | 0.0400005 | chr19:0024( | 0.0400005 |
| ZDHHC12 | 2743 | chr9 | 130523687 | 130531421 | 0.0400033 | chr9:13052( | 0.0400033 |
| NDUFV3 | 2757 | chr21 | 43183040 | 43188255 | 0.0400913 | chr21:0431( | 0.0400913 |
| C19orf59 | 2769 | chr19 | 7641371 | 7650708 | 0.0401412 | chr19:0076( | 0.0401412 |
| POU6F1 | 2771 | chr12 | 49895765 | 49899807 | 0.0401468 | chr12:0498( | 0.0401468 |
| TWIST1 | 2774 | chr7 | 19121019 | 19129123 | 0.0401642 | chr7:019123 | 0.0401642 |
| PLA2G2E | 2783 | chr1 | 20120249 | 20125966 | 0.0401998 | chr1:02012( | 0.0401998 |
| C1orf93 | 2791 | chr1 | 2502810 | 2510677 | 0.0402321 | chr1:00250( | 0.0402321 |
| CAPN9 | 2831 | chr1 | 228945808 | 228952042 | 0.0404381 | chr1:22895( | 0.0404381 |
| RAD54L | 2832 | chr1 | 46481608 | 46488912 | 0.0404385 | chr1:04648( | 0.0404385 |
| SPTLC1 | 2841 | chr9 | 93915384 | 93919970 | 0.0404774 | chr9:093917 | 0.0404774 |
| SLC7A1 | 2846 | chr13 | 29065119 | 29070727 | 0.0405186 | chr13:0290( | 0.0405186 |
| SOX1 | 2848 | chr13 | 111764575 | 111772443 | 0.0405256 | chr13:11177 | 0.0405256 |
| PCDHGA11 | 2851 | chr5 | 140780254 | 140783205 | 0.0405603 | chr5:140783 | 0.0405603 |
| TMEM116 | 2862 | chr12 | 110930720 | 110935303 | 0.0406167 | chr12:11093 | 0.0406167 |
| FLJ10324 | 2877 | chr7 | 4888046 | 4894918 | 0.0406862 | chr7:00488( | 0.0406862 |
| GMPS | 2879 | chr3 | 157068699 | 157073602 | 0.0406901 | chr3:157072 | 0.0406901 |
| NDFIP2 | 2880 | chr13 | 78948000 | 78955989 | 0.0407054 | chr13:0789( | 0.0407054 |
| SLC26A10 | 2884 | chr12 | 56297416 | 56302453 | 0.0407302 | chr12:0563( | 0.0407302 |
| NOV | 2886 | chr8 | 120492951 | 120500295 | 0.0407467 | chr8:120497 | 0.0407467 |
| PPA2 | 2907 | chr4 | 106612134 | 106620202 | 0.0408654 | chr4:10661( | 0.0408654 |
| C16orf80 | 2918 | chr16 | 56718330 | 56723511 | 0.0409312 | chr16:0567( | 0.0409312 |
| FAM89A | 2930 | chr1 | 229240220 | 229248054 | 0.0409834 | chr1:229242 | 0.0409834 |
| VAPB | 2931 | chr20 | 56392151 | 56400339 | 0.0409855 | chr20:0563( | 0.0409855 |
| ARIH1 | 2932 | chr15 | 70548917 | 70556348 | 0.0410014 | chr15:0705( | 0.0410014 |
| ICAM5 | 2933 | chr19 | 10260363 | 10264170 | 0.0410083 | chr19:0102( | 0.0410083 |
| GPR64 | 2936 | chrX | 18917386 | 19056047 | 0.0410148 | chrX:01905( | 0.0410148 |
| ANKRD49 | 2943 | chr11 | 93866867 | 93872069 | 0.0410407 | chr11:0938( | 0.0410407 |
| DNAJC6 | 2946 | chr1 | 65493101 | 65654046 | 0.0410576 | chr1:06550( | 0.0410576 |
| CCNJ | 2949 | chr10 | 97789972 | 97796610 | 0.0410618 | chr10:0977( | 0.0410618 |
| C9orf43 | 2958 | chr9 | 115212908 | 115218211 | 0.0410905 | chr9:115212 | 0.0410905 |
| ZNF75 | 2959 | chrX | 134300958 | 134305628 | 0.0410943 | chrX:13430( | 0.0410943 |
| MND1 | 2966 | chr4 | 154479967 | 154487564 | 0.0411156 | chr4:15448( | 0.0411156 |
| GPM6A | 2975 | chr4 | 176967902 | 177163432 | 0.0411559 | chr4:17716( | 0.0411559 |
| TRIM14 | 2979 | chr9 | 99919998 | 99925528 | 0.0411824 | chr9:09992( | 0.0411824 |
| PTHR1 | 2987 | chr3 | 46894739 | 46902552 | 0.0412259 | chr3:04689( | 0.0412259 |
| SOX2 | 2988 | chr3 | 182907129 | 182915297 | 0.0412284 | chr3:18291( | 0.0412284 |
| ORAOV1 | 2991 | chr11 | 69197294 | 69204453 | 0.0412428 | chr11:0691( | 0.0412428 |

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|---|---|---|---|---|---|---|---|
| C5orf14 | 3006 | chr5 | 134235425 | 134264907 | 0.0413108 | chr5:13423 | 0.0413108 |
| DDEFL1 | 3024 | chr1 | 23680837 | 23688813 | 0.0414083 | chr1:02368 | 0.0414083 |
| KLHL17 | 3036 | chr1 | 885874 | 890972 | 0.0414699 | chr1:00088 | 0.0414699 |
| MGC29891 | 3038 | chr1 | 149307994 | 149311312 | 0.041477 | chr1:14930 | 0.041477 |
| PKN1 | 3046 | chr19 | 14403711 | 14443957 | 0.0415113 | chr19:0144 | 0.0415113 |
| ZBTB5 | 3048 | chr9 | 37453126 | 37458144 | 0.0415156 | chr9:03745 | 0.0415156 |
| TRIM23 | 3056 | chr5 | 64951101 | 64955857 | 0.0415559 | chr5:06495 | 0.0415559 |
| TRAF5 | 3068 | chr1 | 209562349 | 209587798 | 0.041615 | chr1:20956 | 0.041615 |
| CDKL5 | 3076 | chrX | 18348429 | 18356200 | 0.0416664 | chrX:01835 | 0.0416664 |
| SC65 | 3079 | chr17 | 37217692 | 37221966 | 0.0416687 | chr17:0372 | 0.0416687 |
| ADCY4 | 3081 | chr14 | 23856783 | 23874948 | 0.0416776 | chr14:0238 | 0.0416776 |
| STRA8 | 3083 | chr7 | 134563875 | 134569370 | 0.0416939 | chr7:13456 | 0.0416939 |
| C1orf144 | 3105 | chr1 | 16562480 | 16568348 | 0.0417995 | chr1:01656 | 0.0417995 |
| GINS4 | 3110 | chr8 | 41500858 | 41508504 | 0.041828 | chr8:04150 | 0.041828 |
| VPS13A | 3122 | chr9 | 78977140 | 78983960 | 0.0419197 | chr9:07898 | 0.0419197 |
| C1orf97 | 3123 | chr1 | 209617465 | 209624608 | 0.0419237 | chr1:20962 | 0.0419237 |
| FAM60A | 3124 | chr12 | 31367909 | 31375887 | 0.041932 | chr12:0313 | 0.041932 |
| HIBADH | 3139 | chr7 | 27666848 | 27674541 | 0.0419873 | chr7:02766 | 0.0419873 |
| HNRNPG-T | 3151 | chr11 | 7065594 | 7069306 | 0.0420595 | chr11:0070 | 0.0420595 |
| RGAG4 | 3155 | chrX | 71266013 | 71268197 | 0.042073 | chrX:07126 | 0.042073 |
| HS2ST1 | 3163 | chr1 | 87152982 | 87158176 | 0.0421246 | chr1:08715 | 0.0421246 |
| WDR34 | 3170 | chr9 | 130456329 | 130461328 | 0.0421479 | chr9:13045 | 0.0421479 |
| FBXW8 | 3177 | chr12 | 115827640 | 115835051 | 0.0421813 | chr12:1158 | 0.0421813 |
| MPP2 | 3183 | chr17 | 39338325 | 39350113 | 0.0422023 | chr17:0393 | 0.0422023 |
| ANGPTL2 | 3193 | chr9 | 128922399 | 128929716 | 0.0422824 | chr9:12892 | 0.0422824 |
| OSTF1 | 3195 | chr9 | 76893386 | 76898482 | 0.0423049 | chr9:07689 | 0.0423049 |
| FKBP1A | 3198 | chr20 | 1319246 | 1325066 | 0.0423118 | chr20:0013 | 0.0423118 |
| RND3 | 3202 | chr2 | 151049781 | 151057824 | 0.0423382 | chr2:15105 | 0.0423382 |
| TFEB | 3204 | chr6 | 41808532 | 41812212 | 0.0423537 | chr6:04180 | 0.0423537 |
| TBC1D1 | 3206 | chr4 | 37563736 | 37640795 | 0.0423579 | chr4:03756 | 0.0423579 |
| BLVRA | 3208 | chr7 | 43759503 | 43766831 | 0.0423606 | chr7:04376 | 0.0423606 |
| HNRPM | 3214 | chr19 | 8410611 | 8418303 | 0.0423728 | chr19:0084 | 0.0423728 |
| KLHL34 | 3217 | chrX | 21583333 | 21591883 | 0.0423863 | chrX:02158 | 0.0423863 |
| SPATA5L1 | 3219 | chr15 | 43477779 | 43483869 | 0.042406 | chr15:0434 | 0.042406 |
| STARD8 | 3223 | chrX | 67778909 | 67786646 | 0.0424195 | chrX:06778 | 0.0424195 |
| HSDL1 | 3224 | chr16 | 82713393 | 82736224 | 0.0424205 | chr16:0827 | 0.0424205 |
| HMGA1 | 3225 | chr6 | 34307706 | 34318994 | 0.0424301 | chr6:03431 | 0.0424301 |
| SSNA1 | 3234 | chr9 | 139203021 | 139205270 | 0.0424828 | chr9:13920 | 0.0424828 |
| DOHH | 3238 | chr19 | 3445336 | 3459749 | 0.0425094 | chr19:0034 | 0.0425094 |
| KCNA3 | 3261 | chr1 | 111016398 | 111022048 | 0.0426057 | chr1:11101 | 0.0426057 |
| VAPA | 3276 | chr18 | 9898739 | 9906646 | 0.0426565 | chr18:0099 | 0.0426565 |
| KIAA1875 | 3297 | chr8 | 145234671 | 145237082 | 0.042814 | chr8:14523 | 0.042814 |
| PLCB3 | 3309 | chr11 | 63775824 | 63778195 | 0.0428476 | chr11:0637 | 0.0428476 |
| SMTNL2 | 3313 | chr17 | 4429473 | 4436551 | 0.042877 | chr17:0044 | 0.042877 |
| NDUFS7 | 3332 | chr19 | 1329434 | 1337181 | 0.042946 | chr19:0013 | 0.042946 |
| ZFP42 | 3333 | chr4 | 189148902 | 189155752 | 0.0429509 | chr4:18915 | 0.0429509 |
| SOX30 | 3335 | chr5 | 157009747 | 157012243 | 0.0429605 | chr5:15701 | 0.0429605 |
| CCDC71 | 3337 | chr3 | 49176408 | 49178712 | 0.042964 | chr3:04917 | 0.042964 |
| MGLL | 3339 | chr3 | 129021521 | 129029396 | 0.0429768 | chr3:12902 | 0.0429768 |
| PPP1R3D | 3344 | chr20 | 57945290 | 57948624 | 0.0430105 | chr20:0579 | 0.0430105 |
| CHMP5 | 3354 | chr9 | 33255014 | 33259158 | 0.0430845 | chr9:03325 | 0.0430845 |
| CDCP1 | 3365 | chr3 | 45160435 | 45164863 | 0.0431505 | chr3:04516 | 0.0431505 |
| VDAC1 | 3372 | chr5 | 133336492 | 133373895 | 0.0431619 | chr5:13336 | 0.0431619 |
| RASL10A | 3375 | chr22 | 28039003 | 28045489 | 0.0431811 | chr22:0280 | 0.0431811 |
| PLOD2 | 3384 | chr3 | 147358996 | 147367321 | 0.0432365 | chr3:14736 | 0.0432365 |
| CACNA1D | 3393 | chr3 | 53498786 | 53506685 | 0.0432884 | chr3:05350 | 0.0432884 |
| CCDC101 | 3406 | chr16 | 28468085 | 28473295 | 0.0433546 | chr16:0284 | 0.0433546 |
| SELT | 3418 | chr3 | 151798486 | 151806172 | 0.0433858 | chr3:15180 | 0.0433858 |

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|---|---|---|---|---|---|---|---|
| C16orf58 | 3424 | chr16 | 31425715 | 31431331 | 0.043413 | chr16:03142 | 0.043413 |
| CHRDL1 | 3442 | chrX | 109923203 | 109931151 | 0.0434816 | chrX:10992 | 0.0434816 |
| MUC1 | 3444 | chr1 | 153426971 | 153429242 | 0.0434856 | chr1:15342 | 0.0434856 |
| TRPC7 | 3466 | chr5 | 135718566 | 135725973 | 0.0436477 | chr5:13572 | 0.0436477 |
| H1FNT | 3467 | chr12 | 47006329 | 47011739 | 0.0436511 | chr12:0470 | 0.0436511 |
| PITX3 | 3486 | chr10 | 103988794 | 103991039 | 0.0437276 | chr10:1039 | 0.0437276 |
| C1orf94 | 3502 | chr1 | 34414536 | 34418201 | 0.0438076 | chr1:03441 | 0.0438076 |
| TRIM47 | 3504 | chr17 | 71383200 | 71391178 | 0.0438205 | chr17:0713 | 0.0438205 |
| SKP2 | 3516 | chr5 | 36187953 | 36192589 | 0.043865 | chr5:03618 | 0.043865 |
| PSMB9 | 3527 | chr6 | 32929906 | 32935243 | 0.0439364 | chr6:03292 | 0.0439364 |
| CAND1 | 3528 | chr12 | 65944529 | 65952235 | 0.043949 | chr12:0659 | 0.043949 |
| CDC25C | 3529 | chr5 | 137692272 | 137695398 | 0.043955 | chr5:13769 | 0.043955 |
| NOS1 | 3532 | chr12 | 116281639 | 116289305 | 0.0439683 | chr12:1162 | 0.0439683 |
| ZNF692 | 3538 | chr1 | 247117362 | 247125369 | 0.0439921 | chr1:24711 | 0.0439921 |
| PERP | 3540 | chr6 | 138468003 | 138475764 | 0.0440037 | chr6:13846 | 0.0440037 |
| CHST11 | 3541 | chr12 | 103369938 | 103377755 | 0.0440072 | chr12:1033 | 0.0440072 |
| RNF103 | 3568 | chr2 | 86701144 | 86708020 | 0.0441447 | chr2:08670 | 0.0441447 |
| IL6R | 3584 | chr1 | 152639195 | 152647171 | 0.0442452 | chr1:15264 | 0.0442452 |
| DNAJA2 | 3585 | chr16 | 45562570 | 45568887 | 0.0442525 | chr16:0455 | 0.0442525 |
| JARID1B | 3588 | chr1 | 201041667 | 201052028 | 0.0442931 | chr1:20104 | 0.0442931 |
| FMR1NB | 3591 | chrX | 146865391 | 146871066 | 0.0443033 | chrX:14687 | 0.0443033 |
| PSENEN | 3594 | chr19 | 40928375 | 40929656 | 0.0443141 | chr19:0409 | 0.0443141 |
| HAS2 | 3598 | chr8 | 122719857 | 122725936 | 0.0443248 | chr8:12272 | 0.0443248 |
| SLC7A14 | 3603 | chr3 | 171784235 | 171792045 | 0.0443599 | chr3:17178 | 0.0443599 |
| SART1 | 3605 | chr11 | 65484196 | 65488222 | 0.0443658 | chr11:0654 | 0.0443658 |
| TOR1B | 3612 | chr9 | 131601175 | 131607757 | 0.0443904 | chr9:13160 | 0.0443904 |
| HTR2C | 3617 | chrX | 113720089 | 113965715 | 0.0444094 | chrX:11372 | 0.0444094 |
| TFG | 3618 | chr3 | 101906005 | 101913320 | 0.0444123 | chr3:10191 | 0.0444123 |
| H2AFJ | 3622 | chr12 | 14818633 | 14821182 | 0.0444245 | chr12:0148 | 0.0444245 |
| JPH3 | 3623 | chr16 | 86189041 | 86197099 | 0.0444278 | chr16:0861 | 0.0444278 |
| LAP3 | 3628 | chr4 | 17184894 | 17190543 | 0.0444474 | chr4:01718 | 0.0444474 |
| SOX18 | 3629 | chr20 | 62148140 | 62151088 | 0.044449 | chr20:0621 | 0.044449 |
| DPYSL3 | 3635 | chr5 | 146810917 | 146818816 | 0.0444817 | chr5:14681 | 0.0444817 |
| UROS | 3638 | chr10 | 127497082 | 127501692 | 0.0444929 | chr10:1275 | 0.0444929 |
| PPIA | 3639 | chr7 | 44797328 | 44805170 | 0.0444931 | chr7:04480 | 0.0444931 |
| AGXT | 3654 | chr2 | 241451468 | 241459390 | 0.0445587 | chr2:24145 | 0.0445587 |
| GJA5 | 3674 | chr1 | 145696980 | 145717558 | 0.0446688 | chr1:14570 | 0.0446688 |
| HOXB9 | 3690 | chr17 | 44056215 | 44064802 | 0.0447584 | chr17:0440 | 0.0447584 |
| DHX33 | 3691 | chr17 | 5286320 | 5318348 | 0.0447593 | chr17:0053 | 0.0447593 |
| SNX17 | 3696 | chr2 | 27446890 | 27452176 | 0.0447747 | chr2:02744 | 0.0447747 |
| GOLPH3 | 3710 | chr5 | 32208095 | 32215590 | 0.0448319 | chr5:03220 | 0.0448319 |
| SLC9A2 | 3712 | chr2 | 102597273 | 102605097 | 0.0448448 | chr2:10260 | 0.0448448 |
| CYP1A1 | 3715 | chr15 | 72802451 | 72810417 | 0.0448489 | chr15:0728 | 0.0448489 |
| REM1 | 3720 | chr20 | 29526750 | 29528913 | 0.0448731 | chr20:0295 | 0.0448731 |
| IL1F10 | 3726 | chr2 | 113538853 | 113549190 | 0.0449142 | chr2:11354 | 0.0449142 |
| C14orf37 | 3728 | chr14 | 57686288 | 57694162 | 0.0449261 | chr14:0576 | 0.0449261 |
| CUL5 | 3733 | chr11 | 107381092 | 107387043 | 0.044969 | chr11:1073 | 0.044969 |
| GSCL | 3744 | chr22 | 17516541 | 17522840 | 0.0450417 | chr22:0175 | 0.0450417 |
| ITCH | 3772 | chr20 | 32413474 | 32562865 | 0.0452068 | chr20:0324 | 0.0452068 |
| FN1 | 3779 | chr2 | 216006451 | 216013947 | 0.0452386 | chr2:21600 | 0.0452386 |
| ADAM33 | 3783 | chr20 | 3597248 | 3615641 | 0.0452535 | chr20:0036 | 0.0452535 |
| GMEB1 | 3785 | chr1 | 28862968 | 28870242 | 0.0452536 | chr1:02886 | 0.0452536 |
| ATP6AP2 | 3790 | chrX | 40319704 | 40327501 | 0.0452905 | chrX:04032 | 0.0452905 |
| NUBP2 | 3792 | chr16 | 1773039 | 1778025 | 0.0453035 | chr16:0017 | 0.0453035 |
| ISCA1 | 3796 | chr9 | 88084757 | 88092819 | 0.0453225 | chr9:08808 | 0.0453225 |
| TMEM46 | 3798 | chr13 | 25520762 | 25527702 | 0.0453376 | chr13:0255 | 0.0453376 |
| PLXDC2 | 3807 | chr10 | 20140686 | 20148481 | 0.0453692 | chr10:0201 | 0.0453692 |
| C9orf7 | 3818 | chr9 | 135314334 | 135317446 | 0.0454386 | chr9:13531 | 0.0454386 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ZCCHC8 | 3819 | chr12 | 121549101 | 121554785 | 0.0454464 | chr12:12155 | 0.0454464 |
| BMPR1A | 3823 | chr10 | 88501044 | 88628273 | 0.0454666 | chr10:08850 | 0.0454666 |
| PIP5K2C | 3827 | chr12 | 56265776 | 56283260 | 0.0454853 | chr12:05627 | 0.0454853 |
| SRD5A2L | 3833 | chr4 | 55904373 | 55909490 | 0.0455028 | chr4:055907 | 0.0455028 |
| SFRP1 | 3840 | chr8 | 41283839 | 41290635 | 0.0455692 | chr8:04128 | 0.0455692 |
| CUEDC2 | 3851 | chr10 | 104173041 | 104182350 | 0.04562 | chr10:10418 | 0.04562 |
| CENPH | 3852 | chr5 | 68516125 | 68523460 | 0.0456281 | chr5:06852 | 0.0456281 |
| SLC25A21 | 3861 | chr14 | 36708940 | 36715384 | 0.0456806 | chr14:0367 | 0.0456806 |
| SLC25A28 | 3866 | chr10 | 101368250 | 101373317 | 0.0456943 | chr10:10136 | 0.0456943 |
| HNRPA2B1 | 3868 | chr7 | 26202137 | 26206734 | 0.0456979 | chr7:026206 | 0.0456979 |
| AP4M1 | 3870 | chr7 | 99537165 | 99542658 | 0.0457089 | chr7:09953 | 0.0457089 |
| NAPA | 3895 | chr19 | 52682812 | 52715815 | 0.0458459 | chr19:0527 | 0.0458459 |
| PIP5K2A | 3904 | chr10 | 23040800 | 23048726 | 0.0458934 | chr10:0230 | 0.0458934 |
| GABRA5 | 3906 | chr15 | 24660177 | 24665568 | 0.0458949 | chr15:02466 | 0.0458949 |
| TXNL6 | 3919 | chr19 | 17430329 | 17432654 | 0.0460045 | chr19:01743 | 0.0460045 |
| NDUFS6 | 3946 | chr5 | 1854538 | 1857714 | 0.0460997 | chr5:00185 | 0.0460997 |
| C20orf3 | 3952 | chr20 | 24918831 | 24926868 | 0.0461291 | chr20:02492 | 0.0461291 |
| EDARADD | 3966 | chr1 | 234618967 | 234627893 | 0.0462316 | chr1:23462 | 0.0462316 |
| ZNF697 | 3973 | chr1 | 119965171 | 119972839 | 0.0462954 | chr1:11996 | 0.0462954 |
| TMBIM4 | 3974 | chr12 | 64849297 | 64851896 | 0.0462989 | chr12:0648 | 0.0462989 |
| KLHL15 | 3978 | chrX | 23952709 | 23959691 | 0.0463138 | chrX:02395 | 0.0463138 |
| PEX6 | 3989 | chr6 | 43052382 | 43054652 | 0.0463797 | chr6:04305 | 0.0463797 |
| MGEA5 | 3990 | chr10 | 103534273 | 103573039 | 0.0463815 | chr10:1035 | 0.0463815 |
| CDC5L | 3996 | chr6 | 44458086 | 44466026 | 0.0464295 | chr6:04446 | 0.0464295 |
| DSCR6 | 4000 | chr21 | 37295531 | 37303415 | 0.0464434 | chr21:0373 | 0.0464434 |
| SFRS1 | 4002 | chr17 | 53437137 | 53444286 | 0.0464606 | chr17:0534 | 0.0464606 |
| NRP2 | 4003 | chr2 | 206249506 | 206258643 | 0.0464744 | chr2:20625 | 0.0464744 |
| CSNK1G3 | 4009 | chr5 | 122870388 | 122911761 | 0.0464909 | chr5:12287 | 0.0464909 |
| C10orf9 | 4013 | chr10 | 35660599 | 35668503 | 0.0465139 | chr10:0356 | 0.0465139 |
| BCAS4 | 4023 | chr20 | 48839901 | 48845685 | 0.0465503 | chr20:0488 | 0.0465503 |
| GALNT14 | 4024 | chr2 | 31212164 | 31220558 | 0.0465544 | chr2:03121 | 0.0465544 |
| DLG4 | 4025 | chr17 | 7058583 | 7063760 | 0.0465588 | chr17:0070 | 0.0465588 |
| SAFB | 4029 | chr19 | 5574145 | 5578974 | 0.046567 | chr19:0055 | 0.046567 |
| BAI1 | 4034 | chr8 | 143537307 | 143544775 | 0.0466217 | chr8:14354 | 0.0466217 |
| ALS2CR2 | 4037 | chr2 | 202024703 | 202029728 | 0.0466325 | chr2:20202 | 0.0466325 |
| RBL2 | 4043 | chr16 | 52021366 | 52028457 | 0.0466428 | chr16:0520 | 0.0466428 |
| RANGNRF | 4053 | chr17 | 8131889 | 8134137 | 0.0466871 | chr17:0081 | 0.0466871 |
| SMPDL3B | 4056 | chr1 | 28129416 | 28158058 | 0.0467136 | chr1:02815 | 0.0467136 |
| KCNG3 | 4057 | chr2 | 42571721 | 42578948 | 0.0467282 | chr2:04257 | 0.0467282 |
| TP73 | 4065 | chr1 | 3559184 | 3591255 | 0.0467709 | chr1:00358 | 0.0467709 |
| SOX5 | 4066 | chr12 | 23991389 | 24612164 | 0.0467714 | chr12:0246 | 0.0467714 |
| OXSR1 | 4067 | chr3 | 38179424 | 38184593 | 0.0467776 | chr3:03818 | 0.0467776 |
| ZMYM6 | 4071 | chr1 | 35268217 | 35270261 | 0.0467844 | chr1:03527 | 0.0467844 |
| CLTCL1 | 4072 | chr22 | 17657242 | 17662973 | 0.046787 | chr22:0176 | 0.046787 |
| HYOU1 | 4076 | chr11 | 118429804 | 118433600 | 0.046794 | chr11:11843 | 0.046794 |
| SLC37A4 | 4093 | chr11 | 118402904 | 118408060 | 0.0468586 | chr11:1184 | 0.0468586 |
| CXorf57 | 4096 | chrX | 105737242 | 105744068 | 0.0468675 | chrX:10574 | 0.0468675 |
| HMG20B | 4118 | chr19 | 3519061 | 3527962 | 0.0469937 | chr19:0035 | 0.0469937 |
| RRBP1 | 4125 | chr20 | 17586845 | 17615748 | 0.0470315 | chr20:0176 | 0.0470315 |
| PRKCDBP | 4129 | chr11 | 6296109 | 6303755 | 0.0470427 | chr11:0062 | 0.0470427 |
| JAKMIP1 | 4133 | chr4 | 6250612 | 6257828 | 0.0470621 | chr4:00625 | 0.0470621 |
| FIBP | 4143 | chr11 | 65408967 | 65412595 | 0.0470988 | chr11:06541 | 0.0470988 |
| FKBP7 | 4144 | chr2 | 179048834 | 179051575 | 0.0471007 | chr2:17905 | 0.0471007 |
| LOXL1 | 4150 | chr15 | 72000819 | 72008627 | 0.0471216 | chr15:0720 | 0.0471216 |
| PARD6G | 4156 | chr18 | 76103928 | 76111908 | 0.0471488 | chr18:0761 | 0.0471488 |
| ZNF274 | 4162 | chr19 | 63381087 | 63389429 | 0.0471662 | chr19:0633 | 0.0471662 |
| ARD1A | 4163 | chrX | 152848557 | 152853937 | 0.0471748 | chrX:15284 | 0.0471748 |
| ZFP28 | 4165 | chr19 | 61737949 | 61743235 | 0.0471928 | chr19:0617 | 0.0471928 |

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|---|---|---|---|---|---|---|---|
| NUPL1 | 4170 | chr13 | 24769687 | 24776182 | 0.0472536 | chr13:02477 | 0.0472536 |
| POM121 | 4174 | chr7 | 72031599 | 72036258 | 0.0472655 | chr7:072033 | 0.0472655 |
| C11orf31 | 4178 | chr11 | 57265145 | 57268004 | 0.0472928 | chr11:05726 | 0.0472928 |
| DSC3 | 4181 | chr18 | 26874396 | 26882060 | 0.0473086 | chr18:02687 | 0.0473086 |
| CDON | 4182 | chr11 | 125435951 | 125442668 | 0.0473092 | chr11:12543 | 0.0473092 |
| LGI3 | 4200 | chr8 | 22060350 | 22070232 | 0.0474015 | chr8:022068 | 0.0474015 |
| NDUFA13 | 4201 | chr19 | 19487670 | 19500020 | 0.0474023 | chr19:01948 | 0.0474023 |
| MCM6 | 4211 | chr2 | 136313934 | 136353769 | 0.0474775 | chr2:13635( | 0.0474775 |
| ATP1A1 | 4215 | chr1 | 116712366 | 116720088 | 0.0475059 | chr1:116718 | 0.0475059 |
| AUP1 | 4217 | chr2 | 74610082 | 74613324 | 0.0475129 | chr2:07461( | 0.0475129 |
| XKR5 | 4221 | chr8 | 6678826 | 6685991 | 0.047532 | chr8:006678 | 0.047532 |
| TSEN54 | 4225 | chr17 | 71024310 | 71032378 | 0.0475477 | chr17:07102 | 0.0475477 |
| GPATCH8 | 4227 | chr17 | 39934364 | 39941041 | 0.0475512 | chr17:03993 | 0.0475512 |
| GBE1 | 4254 | chr3 | 81891143 | 81898224 | 0.0476779 | chr3:08189( | 0.0476779 |
| IER3 | 4264 | chr6 | 30818949 | 30825711 | 0.0477317 | chr6:03082( | 0.0477317 |
| ISG15 | 4266 | chr1 | 935853 | 939763 | 0.0477385 | chr1:00093( | 0.0477385 |
| PAX1 | 4275 | chr20 | 21629195 | 21637601 | 0.0478022 | chr20:02163 | 0.0478022 |
| ZNF497 | 4277 | chr19 | 63557842 | 63571390 | 0.0478143 | chr19:06356 | 0.0478143 |
| TSSK1 | 4281 | chr5 | 112796424 | 112803226 | 0.047836 | chr5:112797 | 0.047836 |
| SEPT2 | 4290 | chr2 | 241900286 | 241940783 | 0.0478897 | chr2:241903 | 0.0478897 |
| CACNG3 | 4305 | chr16 | 24169567 | 24177927 | 0.0479529 | chr16:02417 | 0.0479529 |
| GNG10 | 4309 | chr9 | 113458614 | 113465839 | 0.0479649 | chr9:113464 | 0.0479649 |
| CHRNB1 | 4325 | chr17 | 7289135 | 7291605 | 0.0480355 | chr17:00728 | 0.0480355 |
| CDH23 | 4329 | chr10 | 72821903 | 72829231 | 0.0480811 | chr10:07282 | 0.0480811 |
| SLC25A36 | 4332 | chr3 | 142143271 | 142146059 | 0.0481041 | chr3:142143 | 0.0481041 |
| CAPN11 | 4333 | chr6 | 44231330 | 44236455 | 0.0481091 | chr6:044234 | 0.0481091 |
| CD46 | 4341 | chr1 | 205988752 | 205994554 | 0.0481422 | chr1:20599( | 0.0481422 |
| MPO | 4355 | chr17 | 53710661 | 53718566 | 0.0482067 | chr17:0537( | 0.0482067 |
| RERG | 4366 | chr12 | 15263607 | 15270134 | 0.0482648 | chr12:01526 | 0.0482648 |
| C3orf18 | 4369 | chr3 | 50576566 | 50580144 | 0.0482687 | chr3:05057( | 0.0482687 |
| TRAPPC2L | 4376 | chr16 | 87451145 | 87455221 | 0.0483381 | chr16:08745 | 0.0483381 |
| SYT10 | 4391 | chr12 | 33481417 | 33489506 | 0.0484292 | chr12:03348 | 0.0484292 |
| FBXO28 | 4392 | chr1 | 222363477 | 222370832 | 0.0484299 | chr1:22236( | 0.0484299 |
| BRI3BP | 4399 | chr12 | 124044211 | 124046360 | 0.048467 | chr12:12404 | 0.048467 |
| TAF7L | 4400 | chrX | 100432363 | 100439818 | 0.0484705 | chrX:10043( | 0.0484705 |
| IFT20 | 4402 | chr17 | 23681576 | 23686450 | 0.0484782 | chr17:02368 | 0.0484782 |
| KCNC1 | 4414 | chr11 | 17709155 | 17716631 | 0.0485474 | chr11:01771 | 0.0485474 |
| C7orf49 | 4423 | chr7 | 134501653 | 134506466 | 0.0485912 | chr7:134503 | 0.0485912 |
| PTPRCAP | 4433 | chr11 | 66959538 | 66961939 | 0.0486774 | chr11:06696 | 0.0486774 |
| RBM35A | 4437 | chr8 | 95717123 | 95724857 | 0.0486912 | chr8:095723 | 0.0486912 |
| CNFN | 4445 | chr19 | 47584698 | 47591718 | 0.0487214 | chr19:04758 | 0.0487214 |
| C14orf39 | 4450 | chr14 | 60019587 | 60027513 | 0.0487474 | chr14:0600( | 0.0487474 |
| TNFSF11 | 4459 | chr13 | 42038433 | 42048827 | 0.0487718 | chr13:04204 | 0.0487718 |
| LPL | 4461 | chr8 | 19838145 | 19843751 | 0.0487944 | chr8:01984( | 0.0487944 |
| ZNF508 | 4462 | chr18 | 75963678 | 75970104 | 0.0487971 | chr18:07596 | 0.0487971 |
| FLJ31818 | 4464 | chr7 | 112364601 | 112372575 | 0.0488071 | chr7:112366 | 0.0488071 |
| CDCA4 | 4467 | chr14 | 104556534 | 104563657 | 0.0488364 | chr14:10455 | 0.0488364 |
| SPESP1 | 4471 | chr15 | 67009944 | 67012498 | 0.048856 | chr15:0670( | 0.048856 |
| XK | 4474 | chrX | 37424516 | 37432182 | 0.0488582 | chrX:03743( | 0.0488582 |
| SMAP1 | 4480 | chr6 | 71429231 | 71436878 | 0.0488854 | chr6:071434 | 0.0488854 |
| EIF4E | 4491 | chr4 | 100066990 | 100075043 | 0.0489153 | chr4:10006( | 0.0489153 |
| ZPBP2 | 4497 | chr17 | 35278129 | 35280653 | 0.0489699 | chr17:03527 | 0.0489699 |
| PROK2 | 4498 | chr3 | 71914427 | 71921716 | 0.0489729 | chr3:071916 | 0.0489729 |
| MCM8 | 4502 | chr20 | 5879322 | 5884369 | 0.0489898 | chr20:00587 | 0.0489898 |
| PHLDA2 | 4503 | chr11 | 2904815 | 2912727 | 0.0489984 | chr11:0029( | 0.0489984 |
| ANKRD43 | 4505 | chr5 | 132171791 | 132180278 | 0.049005 | chr5:132178 | 0.049005 |
| SLC4A10 | 4508 | chr2 | 162183967 | 162191715 | 0.0490283 | chr2:16219( | 0.0490283 |
| C1QL3 | 4528 | chr10 | 16600702 | 16609463 | 0.049141 | chr10:0166( | 0.049141 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| PCNX | 4531 | chr14 | 70438893 | 70446226 | 0.0491584 | chr14:0704 | 0.0491584 |
| NDUFB2 | 4534 | chr7 | 140041577 | 140045505 | 0.0491622 | chr7:14004 | 0.0491622 |
| PMM2 | 4539 | chr16 | 8799188 | 8804256 | 0.0491818 | chr16:0087 | 0.0491818 |
| ZFYVE27 | 4546 | chr10 | 99481616 | 99488839 | 0.049204 | chr10:0994 | 0.049204 |
| NASP | 4556 | chr1 | 45820366 | 45824361 | 0.0492878 | chr1:04582 | 0.0492878 |
| IL4I1 | 4560 | chr19 | 55089433 | 55097079 | 0.0493063 | chr19:0550 | 0.0493063 |
| OVOL1 | 4562 | chr11 | 65311209 | 65313881 | 0.0493248 | chr11:06531 | 0.0493248 |
| C1orf118 | 4564 | chr1 | 78126102 | 78132631 | 0.0493277 | chr1:07812 | 0.0493277 |
| BTBD6 | 4574 | chr14 | 104786093 | 104788201 | 0.0493626 | chr14:1047 | 0.0493626 |
| ACRBP | 4575 | chr12 | 6617493 | 6627761 | 0.0493669 | chr12:0066 | 0.0493669 |
| MYH9 | 4577 | chr22 | 35073394 | 35118120 | 0.0493722 | chr22:03511 | 0.0493722 |
| B3GAT2 | 4579 | chr6 | 71720402 | 71728904 | 0.0493945 | chr6:07172 | 0.0493945 |
| DSCR9 | 4582 | chr21 | 37497423 | 37515952 | 0.0494239 | chr21:0375 | 0.0494239 |
| ADORA1 | 4597 | chr1 | 201359184 | 201366620 | 0.0495128 | chr1:20136 | 0.0495128 |
| CKAP2 | 4605 | chr13 | 51927630 | 51929659 | 0.0495588 | chr13:0519 | 0.0495588 |
| INPP4A | 4608 | chr2 | 98425813 | 98430330 | 0.0495672 | chr2:09842 | 0.0495672 |
| FAM105B | 4609 | chr5 | 14717182 | 14734239 | 0.0495698 | chr5:01471 | 0.0495698 |
| TMED8 | 4618 | chr14 | 76908288 | 76913102 | 0.0496137 | chr14:0769 | 0.0496137 |
| FBLN5 | 4619 | chr14 | 91481526 | 91489182 | 0.049622 | chr14:0914 | 0.049622 |
| PTPN2 | 4626 | chr18 | 12871911 | 12879677 | 0.0496417 | chr18:0128 | 0.0496417 |
| TFPI2 | 4631 | chr7 | 93355413 | 93363449 | 0.0496588 | chr7:09335 | 0.0496588 |
| HLA-E | 4640 | chr6 | 30560371 | 30566828 | 0.0497189 | chr6:03056 | 0.0497189 |
| SLCO4C1 | 4645 | chr5 | 101658008 | 101663783 | 0.0497474 | chr5:10165 | 0.0497474 |
| RAB4A | 4647 | chr1 | 227471026 | 227475822 | 0.0497528 | chr1:22747 | 0.0497528 |
| IGFALS | 4650 | chr16 | 1781134 | 1785754 | 0.0497616 | chr16:0017 | 0.0497616 |
| MTMR2 | 4655 | chr11 | 95294252 | 95302471 | 0.0497993 | chr11:0952 | 0.0497993 |
| WDR79 | 4659 | chr17 | 7532506 | 7547569 | 0.0498156 | chr17:0075 | 0.0498156 |
| CIB1 | 4663 | chr15 | 88575609 | 88578181 | 0.0498365 | chr15:0885 | 0.0498365 |
| C15orf2 | 4665 | chr15 | 22467617 | 22474442 | 0.0498482 | chr15:0224 | 0.0498482 |
| CALCB | 4667 | chr11 | 15048742 | 15054089 | 0.0498616 | chr11:0150 | 0.0498616 |
| EIF5B | 4668 | chr2 | 99320266 | 99324407 | 0.0498645 | chr2:09932 | 0.0498645 |
| C9orf66 | 4671 | chr9 | 202976 | 211257 | 0.0498786 | chr9:00020 | 0.0498786 |
| PDE6G | 4674 | chr17 | 77231630 | 77242392 | 0.0499122 | chr17:0772 | 0.0499122 |
| PRDM8 | 4678 | chr4 | 81321454 | 81327836 | 0.0499433 | chr4:08132 | 0.0499433 |
| MRPS26 | 4682 | chr20 | 2974372 | 2977142 | 0.049971 | chr20:0029 | 0.049971 |
| POPDC3 | 4687 | chr6 | 105714157 | 105737213 | 0.0499855 | chr6:10573 | 0.0499855 |

**HPSE- bound genes (3'-transcribe region)** **NS subset (1 gene)**

| Gene | Rank (Hep-I | Chromosom | Start | End | Min P(Xbar) | Probe | P(Xbar) |
|---|---|---|---|---|---|---|---|
| C20orf55 | 4796 | chr20 | 759936 | 775960 | 0.042589 | chr20:0007 | 0.042589 |

**HPSE- bound genes (3'-transcribe region)** **NS and ST subset (27 ger**

| Gene | Rank (Hep- | Chromosom | Start | End | Min P(Xbar) | Probe | P(Xbar) |
|---|---|---|---|---|---|---|---|
| PRKACG | 230 | chr9 | 70816672 | 70823985 | 0.0219123 | chr9:07081 | 0.0219123 |
| CSF2 | 416 | chr5 | 131432127 | 131439910 | 0.0244134 | chr5:13143 | 0.0244134 |
| H1FX | 457 | chr3 | 130514329 | 130517453 | 0.024832 | chr3:13051 | 0.024832 |
| MRPS2 | 585 | chr9 | 137532369 | 137538898 | 0.0262781 | chr9:13753 | 0.0262781 |
| SMPD2 | 745 | chr6 | 109868778 | 109871909 | 0.027653 | chr6:10987 | 0.027653 |
| SLC34A1 | 844 | chr5 | 176738736 | 176759024 | 0.0284824 | chr5:17675 | 0.0284824 |
| CLDN4 | 916 | chr7 | 72878316 | 72885889 | 0.0290512 | chr7:07288 | 0.0290512 |
| PFN3 | 970 | chr5 | 176759149 | 176761683 | 0.0295863 | chr5:17675 | 0.0295863 |
| U83 | 1077 | chr6 | 31603996 | 31616762 | 0.0303325 | chr6:03160 | 0.0303325 |
| LENEP | 1247 | chr1 | 153232219 | 153243417 | 0.0314431 | chr1:15323 | 0.0314431 |
| GSH1 | 1279 | chr13 | 27259651 | 27267246 | 0.0316613 | chr13:0272 | 0.0316613 |
| hsa-mir-339 | 1627 | chr7 | 1026744 | 1034601 | 0.0340398 | chr7:00102 | 0.0340398 |
| MRPL36 | 1814 | chr5 | 1849656 | 1852905 | 0.035146 | chr5:00185 | 0.035146 |
| SCAMP2 | 1919 | chr15 | 72920147 | 72955954 | 0.0356812 | chr15:0729 | 0.0356812 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| C17orf68 | 2241 | chr17 | 8065106 | 8092032 | 0.0374817 | chr17:00806 | 0.0374817 |
| IFITM1 | 2282 | chr11 | 302284 | 306519 | 0.0376952 | chr11:00030 | 0.0376952 |
| hsa-mir-182 | 2529 | chr7 | 129195256 | 129201533 | 0.0388747 | chr7:129196 | 0.0388747 |
| COMTD1 | 2686 | chr10 | 76663241 | 76670399 | 0.0397659 | chr10:07666 | 0.0397659 |
| POU3F3 | 2864 | chr2 | 104833131 | 104840817 | 0.0406207 | chr2:10484( | 0.0406207 |
| DNAJC18 | 3053 | chr5 | 138765266 | 138808109 | 0.0415395 | chr5:138767 | 0.0415395 |
| PLAGL2 | 3353 | chr20 | 30239362 | 30259110 | 0.0430839 | chr20:0302- | 0.0430839 |
| hsa-mir-150 | 3420 | chr19 | 54695518 | 54697818 | 0.0434031 | chr19:0546( | 0.0434031 |
| hsa-mir-296 | 3488 | chr20 | 56823849 | 56831559 | 0.0437326 | chr20:0568: | 0.0437326 |
| STRA13 | 4033 | chr17 | 77569269 | 77574080 | 0.0466038 | chr17:07756 | 0.0466038 |
| C19orf23 | 4090 | chr19 | 1215697 | 1224093 | 0.0468477 | chr19:0012' | 0.0468477 |
| hsa-mir-210 | 4405 | chr11 | 556147 | 558141 | 0.0484899 | chr11:00055 | 0.0484899 |
| ANKRD9 | 4616 | chr14 | 102041472 | 102051331 | 0.0496015 | chr14:1020- | 0.0496015 |

**HPSE- bound genes (3'-transcribe region)** **ST subset (6 genes)**

| Gene | Rank (Hep- | Chromosom | Start | End | Min P(Xbar) | Probe | P(Xbar) |
|---|---|---|---|---|---|---|---|
| B3GALT6 | 3435 | chr1 | 1157693 | 1162786 | 0.0434682 | chr1:001160 | 0.0434682 |
| IFNA5 | 3461 | chr9 | 21293176 | 21300727 | 0.043596 | chr9:02129- | 0.043596 |
| POU3F4 | 3606 | chrX | 82644494 | 82652390 | 0.0443684 | chrX:08265: | 0.0443684 |
| ZNF524 | 3611 | chr19 | 60803651 | 60808110 | 0.0443871 | chr19:0608( | 0.0443871 |
| NUDT16L1 | 3981 | chr16 | 4681176 | 4686190 | 0.0463318 | chr16:00468 | 0.0463318 |
| AVP | 4237 | chr20 | 3011034 | 3016978 | 0.0476023 | chr20:0030' | 0.0476023 |

| Normalized I | Normalized I | Type | transcript int | Normalized I | Normalized I | Rank (P2-NS_R1R2) |
|---|---|---|---|---|---|---|
| 1.6946661 | 3.2370196 | PROMOTER | 349.1784 | | | |
| 2.0455458 | 4.12829424 | PROMOTER | 931.9619 | 2.3510373 | 5.10190947 | 453 |
| 1.5985998 | 3.02849242 | PROMOTER | 102.4286 | 1.5807912 | 2.99133855 | 3664 |
| 1.6431262 | 3.12341918 | PROMOTER | | 1.4916544 | 2.81211267 | 1946 |
| 1.6007885 | 3.03309041 | PROMOTER | 477.5922 | 2.18063 | 4.53351482 | 44 |
| 1.9508412 | 3.86599883 | PROMOTER | | 2.1356945 | 4.39448621 | 403 |
| 1.960222 | 3.89121852 | PROMOTER | | 2.2489474 | 4.75335911 | 4646 |
| 1.7478212 | 3.35850971 | PROMOTER | | | | |
| 1.5877273 | 3.00575475 | PROMOTER | 2981.618 | | | |
| 1.6824327 | 3.20968719 | PROMOTER | | 1.6864398 | 3.21861452 | 4138 |
| 1.6899939 | 3.22655339 | PROMOTER | | | | |
| 1.806977 | 3.49908328 | PROMOTER | 192.2641 | 1.7508575 | 3.36558548 | 2029 |
| 1.6733087 | 3.18945229 | PROMOTER | 955.4666 | 1.5921743 | 3.01503406 | 5149 |
| 1.6078209 | 3.04791126 | PROMOTER | | 1.427658 | 2.69009664 | 333 |
| 1.7093471 | 3.27012798 | PROMOTER | | 1.7664446 | 3.40214493 | 3652 |
| 1.6172404 | 3.06787648 | PROMOTER | 504.4035 | 1.7010162 | 3.25129892 | 132 |
| 1.6945639 | 3.2367903 | PROMOTER | 619.0972 | 1.8440356 | 3.59012879 | 335 |
| 1.8962046 | 3.72232649 | PROMOTER | 1887.499 | 1.896014 | 3.72183475 | 436 |
| 1.7743663 | 3.42087716 | PROMOTER | 221.7472 | | | |
| 1.7912664 | 3.46118583 | PROMOTER | 250.6388 | 1.5111104 | 2.85029333 | 2397 |
| 2.0833395 | 4.23787049 | PROMOTER | 646.2028 | 2.0286946 | 4.08035479 | 1259 |
| 1.5986325 | 3.02856106 | DIVERGENT_PROMOTI | | 2.2037764 | 4.60683651 | 3865 |
| 1.837827 | 3.57471196 | PROMOTER | 468.7692 | | | |
| 1.6853172 | 3.216111 | PROMOTER | | 1.153844 | 2.22505963 | 5331 |
| 1.5962083 | 3.02347636 | PROMOTER | 141.1145 | | | |
| 1.7209972 | 3.29664194 | PROMOTER | 101.0022 | 1.735053 | 3.32891723 | 4046 |
| 1.624652 | 3.08367773 | PROMOTER | | 2.229702 | 4.69037086 | 3203 |
| 1.6718808 | 3.18629711 | PROMOTER | 531.2459 | 1.7678 | 3.40534272 | 911 |
| 1.870776 | 3.65729246 | PROMOTER | 290.1844 | | | |
| 1.8226057 | 3.53719487 | PROMOTER | 152.1383 | 1.087919 | 2.125672 | 5986 |
| 1.7518294 | 3.36785354 | PROMOTER | 304.9474 | 0.93507755 | 1.91199341 | 4736 |
| 1.7914807 | 3.46169999 | PROMOTER | | 1.9507732 | 3.86581661 | 4220 |
| 1.641076 | 3.11898367 | PROMOTER | | 1.5661501 | 2.96113466 | 5191 |
| 2.0271864 | 4.07609139 | PROMOTER | 976.2021 | 1.2476641 | 2.3745664 | 356 |
| 1.7613813 | 3.39022565 | PROMOTER | 392.7919 | 1.5753615 | 2.98010156 | 5237 |
| 1.8816087 | 3.68485717 | PROMOTER | 180.688 | | | |
| 1.6013572 | 3.03428626 | PROMOTER | 212.4596 | 2.022684 | 4.06339045 | 2301 |
| 1.8259119 | 3.54531029 | PROMOTER | | | | |
| 1.5939357 | 3.01871739 | PROMOTER | 11049.93 | 1.7809942 | 3.4366292 | 3813 |
| 1.6597928 | 3.15971142 | PROMOTER | 107.8632 | 1.2155949 | 2.32236527 | 3186 |
| 1.6022013 | 3.0360621 | PROMOTER | 343.8329 | 0.9931815 | 1.99056985 | 1847 |
| 1.8096899 | 3.50566928 | DIVERGENT_PROMOTI | | 0.89160764 | 1.85524233 | 4078 |
| 2.205326 | 4.61178738 | PROMOTER | 196.2928 | 1.4165976 | 2.6695519 | 4849 |
| 1.7898233 | 3.4577254 | DIVERGENT_PROMOTI | | 1.2690129 | 2.40996618 | 2088 |
| 1.7096217 | 3.27075047 | PROMOTER | 1532.474 | 1.3223574 | 2.50074404 | 2252 |
| 1.7625412 | 3.39295242 | PROMOTER | 1320.521 | 1.9555236 | 3.87856667 | 1353 |
| 1.7167363 | 3.2869199 | PROMOTER | | 2.0177205 | 4.04943464 | 2847 |
| 1.6104373 | 3.05344382 | PROMOTER | 254.1528 | | | |
| 1.7465773 | 3.35561523 | PROMOTER | 165.0192 | 2.277281 | 4.84763474 | 2138 |
| 1.7264397 | 3.30910186 | PROMOTER | 1146.613 | | | |
| 1.6268333 | 3.08834366 | DIVERGENT_PROMOTI | | 1.4164749 | 2.66932487 | 2590 |
| 1.6913123 | 3.22950331 | DIVERGENT_PROMOTI | | 2.1887374 | 4.55906317 | 5794 |
| 1.6216697 | 3.07730982 | PROMOTER | 116.6261 | 1.4374722 | 2.7084589 | 6217 |
| 1.7050593 | 3.26042334 | PROMOTER | 195.9528 | 0.9130657 | 1.88304268 | 5839 |
| 1.6292021 | 3.09341866 | PROMOTER | 307.0241 | 1.506172 | 2.84055335 | 4248 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.9712881 | 3.92118063 | PROMOTER | 427.0619 | | | |
| 1.6374259 | 3.11110244 | PROMOTER | 343.6555 | | | |
| 1.5904144 | 3.01135835 | PROMOTER | 1368.956 | 1.4862663 | 2.80162973 | 4177 |
| 1.637516 | 3.11129674 | PROMOTER | 436.7325 | 1.8853652 | 3.69446433 | 3590 |
| 1.9360845 | 3.82665676 | DIVERGENT_PROMOTI | | 2.4028814 | 5.28858364 | 2149 |
| 1.6139565 | 3.06090125 | PROMOTER | 151.4697 | | | |
| 1.9182503 | 3.77964386 | PROMOTER | | | | |
| 1.6901294 | 3.22685645 | DIVERGENT_PROMOTER | | | | |
| 1.6589174 | 3.15779475 | PROMOTER | 516.0404 | 1.705497 | 3.26141267 | 533 |
| 1.7141278 | 3.28098228 | PROMOTER | 166.8988 | | | |
| 1.6181657 | 3.06984476 | PROMOTER | | | | |
| 1.7599277 | 3.38681152 | PROMOTER | | 1.9840357 | 3.95598156 | 855 |
| 1.6503581 | 3.13911547 | PROMOTER | | | | |
| 1.8347766 | 3.56716166 | PROMOTER | 312.4221 | 0.7349208 | 1.6643061 | 3593 |
| 1.6473029 | 3.13247479 | PROMOTER | 899.4793 | 1.3600994 | 2.56702865 | 2946 |
| 1.9766387 | 3.93575032 | PROMOTER | 2112.34 | | | |
| 1.6802591 | 3.20485503 | PROMOTER | | 1.3990449 | 2.63726931 | 6090 |

**enes)**

| Normalized | Normalized | Type | transcript in | Normalized | Normalized | Rank (P2-12H_R1R2) |
|---|---|---|---|---|---|---|
| 3.2446012 | 9.4781218 | PROMOTEI | 372.4899 | 2.244804 | 4.7397271 | 368 |
| 2.24925 | 4.7543562 | PROMOTEI | 147.2939 | 1.7255064 | 3.3069618 | 304 |
| 2.0089388 | 4.0248606 | PROMOTER | | 1.8470445 | 3.5976242 | 1821 |
| 2.1724944 | 4.5080215 | PROMOTER | | 1.901363 | 3.7356596 | 607 |
| 2.627991 | 6.1816458 | PROMOTEI | 100.2909 | 1.7741791 | 3.4204333 | 2137 |
| 2.116326 | 4.3358835 | PROMOTEI | 805.6806 | 2.1911242 | 4.5666119 | 95 |
| 2.4647837 | 5.5204417 | PROMOTEI | 674.3422 | 1.5212623 | 2.8704209 | 916 |
| 2.11264 | 4.3248197 | PROMOTEI | 509.4315 | 1.6530952 | 3.1450767 | 634 |
| 2.6951475 | 6.4761998 | PROMOTER | | 2.2038252 | 4.6069923 | 625 |
| 3.7420719 | 13.380609 | PROMOTEI | 1042.168 | 2.1819804 | 4.5377603 | 423 |
| 2.6443691 | 6.2522224 | PROMOTER | | 1.9254575 | 3.7985729 | 149 |
| 2.3601732 | 5.1343199 | DIVERGENT_PROMOT | | 1.9217023 | 3.7886984 | 507 |
| 2.340503 | 5.0647919 | PROMOTEI | 104.7124 | 1.7331454 | 3.3245185 | 3440 |
| 2.3715134 | 5.1748369 | PROMOTEI | 179.0851 | 1.9026538 | 3.7390034 | 618 |
| 2.313937 | 4.9723815 | PROMOTER | | 2.0388584 | 4.1092024 | 565 |
| 2.7114604 | 6.5498433 | PROMOTEI | 1387.445 | 1.9261808 | 3.8004778 | 2500 |
| 2.0403912 | 4.1135706 | PROMOTER | | 1.9240566 | 3.7948861 | 1068 |
| 2.6251104 | 6.1693154 | PROMOTEI | 497.4486 | 1.81663 | 3.522574 | 338 |
| 2.4132771 | 5.3268295 | PROMOTEI | 512.6608 | 1.8658172 | 3.6447433 | 1049 |
| 2.2644248 | 4.8046282 | PROMOTEI | 1293.835 | 1.8263656 | 3.5464254 | 3118 |
| 2.2597637 | 4.7891303 | PROMOTEI | 495.9976 | | | |
| 2.2199736 | 4.6588491 | PROMOTER | | 1.2889713 | 2.4435376 | 3603 |
| 2.4043584 | 5.2940008 | PROMOTEI | 146.3796 | 1.945968 | 3.8529621 | 1553 |
| 2.541332 | 5.8212622 | PROMOTER | | 2.3342626 | 5.0429314 | 435 |
| 2.6727724 | 6.3765338 | PROMOTEI | 295.4451 | 2.851236 | 7.2161834 | 209 |
| 3.047422 | 8.267333 | PROMOTER | | 1.7252098 | 3.306282 | 5482 |
| 2.372312 | 5.1777022 | PROMOTER | | 1.6168283 | 3.0670003 | 587 |
| 2.017411 | 4.048566 | PROMOTEI | 114.5603 | 1.6012695 | 3.0341018 | 3227 |
| 1.8056784 | 3.4959351 | PROMOTEI | 169.6603 | 1.662888 | 3.1664976 | 325 |
| 2.7167711 | 6.5739984 | PROMOTEI | 323.284 | 1.8312038 | 3.5583386 | 1654 |
| 2.4373403 | 5.4164226 | PROMOTEI | 743.0607 | 1.8135802 | 3.5151352 | 1136 |
| 1.9889077 | 3.9693635 | PROMOTER | | 2.3176744 | 4.9852795 | 100 |
| 2.2393265 | 4.7217658 | PROMOTEI | 207.7432 | 1.752988 | 3.3705593 | 849 |
| 2.0224416 | 4.0627078 | PROMOTEI | 291.2479 | 1.8284483 | 3.5515488 | 246 |
| 1.9285192 | 3.8066428 | PROMOTEI | 386.0517 | 1.8607962 | 3.6320806 | 1123 |
| 2.0182962 | 4.0510509 | PROMOTER | | 2.4357758 | 5.410552 | 543 |
| 1.6594065 | 3.1588655 | PROMOTEI | 554.6144 | 1.4150869 | 2.666758 | 2295 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3.075324 | 8.428781 | PROMOTEI | 562.1805 | 2.332065 | 5.0352556 | 546 |
| 2.3359962 | 5.0489948 | PROMOTER | | 1.8140274 | 3.516225 | 1410 |
| 2.6158063 | 6.1296568 | PROMOTEI | 131.6599 | 2.1228356 | 4.3554917 | 2292 |
| 1.8644327 | 3.6412472 | PROMOTER | | 1.6345619 | 3.1049325 | 1229 |
| 2.315633 | 4.9782304 | PROMOTEI | 603.39 | 1.1742498 | 2.256755 | 5270 |
| 1.934772 | 3.823177 | PROMOTER | | 1.64766 | 3.1332502 | 509 |
| 1.9794965 | 3.9435543 | PROMOTEI | 146.997 | 2.047102 | 4.1327497 | 1020 |
| 2.4265373 | 5.3760155 | PROMOTEI | 1602.095 | 2.0291908 | 4.0817584 | 448 |
| 2.3336878 | 5.0409226 | PROMOTER | | 1.9404097 | 3.8381463 | 238 |
| 2.097031 | 4.2782803 | PROMOTEI | 500.6469 | 1.8079165 | 3.5013627 | 343 |
| 1.8301169 | 3.5556588 | DIVERGENT_PROMOT | | 1.5244334 | 2.8767371 | 4190 |
| 2.1909518 | 4.5660663 | PROMOTEI | 198.9119 | 1.9167603 | 3.7757423 | 1085 |
| 2.0300522 | 4.0841963 | PROMOTER | | 2.06461 | 4.1832088 | 892 |
| 2.3713174 | 5.1741339 | DIVERGENT_PROMOT | | 2.0627394 | 4.1777883 | 404 |
| 1.8803082 | 3.681537 | PROMOTER | | 1.751397 | 3.3668443 | 3801 |
| 2.558505 | 5.8909692 | PROMOTEI | 3983.539 | 1.7049142 | 3.2600954 | 600 |
| 2.2193787 | 4.6569284 | PROMOTER | | 1.5229189 | 2.8737188 | 941 |
| 1.9163419 | 3.7746474 | PROMOTER | | 2.340314 | 5.0641285 | 323 |
| 1.9649805 | 3.9040743 | PROMOTER | | 1.8373712 | 3.5735828 | 1361 |
| 2.0247102 | 4.0691013 | PROMOTER | | 1.2001958 | 2.2977085 | 2963 |
| 2.9380183 | 7.663579 | PROMOTER | | 2.2374718 | 4.7156995 | 1324 |
| 2.4561818 | 5.4876246 | PROMOTEI | 756.826 | 1.4408864 | 2.7148762 | 469 |
| 2.2896063 | 4.8892267 | PROMOTER | | 1.9785426 | 3.9409477 | 900 |
| 2.144018 | 4.4199131 | PROMOTEI | 277.3046 | 1.5687383 | 2.9664517 | 3589 |
| 2.1206827 | 4.348997 | PROMOTEI | 263.4749 | 2.0687768 | 4.1953082 | 789 |
| 2.4987078 | 5.6517898 | PROMOTER | | 1.7244707 | 3.3045887 | 1076 |
| 2.004055 | 4.0112587 | PROMOTER | | 1.5622185 | 2.953076 | 511 |
| 2.5504315 | 5.8580946 | PROMOTEI | 130.9934 | 2.1653726 | 4.4858227 | 189 |
| 2.28037 | 4.8580253 | PROMOTEI | 198.5816 | 2.5902731 | 6.0221269 | 175 |
| 2.2343612 | 4.705543 | PROMOTER | | 1.8702948 | 3.6560728 | 2075 |
| 2.3733118 | 5.1812917 | PROMOTEI | 328.9762 | 1.5672139 | 2.9633189 | 418 |
| 2.3550174 | 5.116004 | DIVERGENT_PROMOT | | 2.599225 | 6.0596102 | 13 |
| 2.5058062 | 5.6796664 | PROMOTER | | 1.9148661 | 3.7707882 | 473 |
| 1.7131184 | 3.2786875 | PROMOTEI | 1178.008 | 1.7630281 | 3.3940977 | 2557 |
| 1.9767227 | 3.9359795 | PROMOTEI | 235.1872 | 1.4570664 | 2.7454952 | 3151 |
| 2.167831 | 4.4934732 | PROMOTEI | 180.927 | 2.015335 | 4.0427444 | 1513 |
| 2.7581565 | 6.7653121 | PROMOTER | | | | |
| 2.062929 | 4.1783374 | PROMOTER | | 1.8328574 | 3.5624195 | 1353 |
| 2.0110896 | 4.0308654 | PROMOTER | | 1.5392938 | 2.9065219 | 1155 |
| 2.9771042 | 7.8740409 | PROMOTER | | 2.0089793 | 4.0249735 | 956 |
| 2.12894 | 4.3739599 | PROMOTER | | 1.3025734 | 2.4666848 | 1871 |
| 2.9035594 | 7.4827024 | PROMOTEI | 149.0201 | 1.7166988 | 3.2868345 | 2068 |
| 1.7904893 | 3.459322 | PROMOTER | | 1.4379878 | 2.709427 | 780 |
| 2.1271434 | 4.3685164 | PROMOTER | | | | |
| 2.5091271 | 5.6927553 | PROMOTER | | 1.5184153 | 2.864762 | 802 |
| 2.0984795 | 4.2825779 | PROMOTEI | 216.3963 | 1.6603135 | 3.160852 | 308 |
| 2.6746807 | 6.3849738 | PROMOTEI | 264.097 | 1.6186844 | 3.0709487 | 4451 |
| 2.0836737 | 4.2388523 | PROMOTER | | 2.0212474 | 4.0593462 | 415 |
| 2.215818 | 4.6454489 | DIVERGENT_PROMOT | | 1.8653946 | 3.6436758 | 879 |
| 2.254612 | 4.7720594 | PROMOTER | | 1.4295784 | 2.6936799 | 5324 |
| 1.9549575 | 3.8770451 | DIVERGENT_PROMOT | | 1.3830311 | 2.6081577 | 2175 |
| 2.3203259 | 4.9944503 | PROMOTER | | 1.8196267 | 3.5298985 | 2057 |
| 2.5040348 | 5.672697 | DIVERGENT_PROMOT | | 2.2830372 | 4.8670149 | 3449 |
| 2.1560745 | 4.4570048 | PROMOTEI | 268.3294 | 1.561164 | 2.9509183 | 1545 |
| 2.1685083 | 4.4955832 | PROMOTEI | 1447.156 | 1.5275209 | 2.8829002 | 1250 |
| 2.3027368 | 4.9339285 | PROMOTER | | 1.4705979 | 2.7713672 | 2111 |
| 2.4377832 | 5.4180856 | PROMOTEI | 139.5905 | 2.0581732 | 4.1645863 | 4307 |
| 1.6482673 | 3.1345695 | PROMOTER | | 1.5088869 | 2.8459038 | 4884 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.1807196 | 4.5337964 | PROMOTEI | 219.8032 | 1.4572767 | 2.7458955 | 2692 |
| 1.9251148 | 3.7976707 | PROMOTER | | 1.5962154 | 3.0234912 | 1500 |
| 1.7435778 | 3.3486458 | PROMOTEI | 108.5363 | 1.3703412 | 2.585317 | 2460 |
| 2.6059072 | 6.0877419 | PROMOTER | | 1.505103 | 2.8384494 | 1854 |
| 2.0897396 | 4.2567123 | PROMOTER | | | | |
| 2.3078513 | 4.9514508 | PROMOTER | | 2.1102211 | 4.3175746 | 245 |
| 1.7593672 | 3.385496 | PROMOTEI | 2013.779 | 2.7928522 | 6.9299849 | 617 |
| 1.7155311 | 3.2841752 | PROMOTEI | 1216.541 | 1.2991444 | 2.460829 | 2750 |
| 1.8516117 | 3.6090314 | PROMOTEI | 122.4018 | 1.8809965 | 3.6832939 | 2443 |
| 2.0759022 | 4.2160799 | PROMOTER | | 1.9013746 | 3.7356896 | 5599 |
| 2.4989908 | 5.6528985 | PROMOTEI | 620.1183 | | | |
| 2.1089764 | 4.3138512 | PROMOTER | | 1.6515763 | 3.1417672 | 2889 |
| 2.1461396 | 4.4264177 | PROMOTEI | 226.9891 | 1.6084273 | 3.0491926 | 1869 |
| 1.8145854 | 3.5175853 | PROMOTER | | 2.0383987 | 4.1078933 | 177 |
| 2.095512 | 4.2737781 | PROMOTEI | 652.0862 | 2.0779927 | 4.2221935 | 3769 |
| 2.3283575 | 5.0223323 | PROMOTEI | 268.2301 | 2.3014767 | 4.9296209 | 647 |
| 1.8926837 | 3.7132532 | PROMOTEI | 898.3925 | | | |
| 2.3978431 | 5.2701466 | PROMOTEI | 181.4809 | 1.8534158 | 3.6135474 | 611 |
| 2.0894089 | 4.2557367 | PROMOTEI | 127.4161 | 1.6768227 | 3.1972304 | 3781 |
| 1.8432889 | 3.5882711 | PROMOTEI | 382.6966 | 2.3941476 | 5.2566643 | 1603 |
| 2.2612133 | 4.7939448 | PROMOTER | | | | |
| 2.2004645 | 4.596273 | PROMOTEI | 782.634 | 1.8335243 | 3.5640666 | 1335 |
| 2.0920913 | 4.2636568 | DIVERGENT_PROMOT | | 1.0952482 | 2.1364983 | 592 |
| 2.0556312 | 4.1572549 | PROMOTER | | 1.5491154 | 2.9263765 | 3019 |
| 2.158249 | 4.4637276 | PROMOTEI | 5441.286 | 1.8526706 | 3.6116813 | 1109 |
| 1.8657433 | 3.6445566 | DIVERGENT_PROMOT | | 1.6151568 | 3.0634489 | 334 |
| 1.8609796 | 3.6325423 | PROMOTEI | 152.4173 | 1.6143249 | 3.061683 | 3667 |
| 2.2020397 | 4.6012942 | PROMOTEI | 197.5539 | 2.2084715 | 4.6218534 | 1226 |
| 2.2298064 | 4.6907103 | PROMOTEI | 2357.48 | 1.6870657 | 3.2200112 | 1379 |
| 2.0175018 | 4.0488208 | PROMOTER | | 1.5416718 | 2.9113167 | 1111 |
| 2.179142 | 4.5288413 | PROMOTEI | 138.86 | 1.6618974 | 3.1643242 | 928 |
| 2.4822032 | 5.5875011 | DIVERGENT_PROMOT | | 2.1701572 | 4.5007243 | 1419 |
| 2.065787 | 4.186623 | PROMOTEI | 416.6731 | 2.0406296 | 4.1142504 | 141 |
| 1.6245322 | 3.0834217 | PROMOTER | | 1.9972374 | 3.9923478 | 706 |
| 1.6648673 | 3.1708449 | PROMOTEI | 4901.149 | 1.421155 | 2.6779982 | 3083 |
| 2.2875288 | 4.8821912 | PROMOTER | | 1.9588695 | 3.8875723 | 223 |
| 2.5166318 | 5.7224454 | PROMOTEI | 472.0648 | 1.7200383 | 3.2944515 | 948 |
| 2.817624 | 7.0500036 | PROMOTER | | 1.6884221 | 3.22304 | 4024 |
| 2.3619335 | 5.1405884 | PROMOTER | | 1.6497023 | 3.1376889 | 1646 |
| 2.0261106 | 4.073053 | PROMOTER | | 1.4786249 | 2.7868298 | 2329 |
| 1.9391104 | 3.8346912 | PROMOTEI | 3583.389 | 1.994715 | 3.9853737 | 450 |
| 2.179365 | 4.5295414 | PROMOTEI | 1696.766 | 1.935549 | 3.8252366 | 500 |
| 2.07827 | 4.2230051 | PROMOTER | | 1.44186 | 2.7167089 | 2803 |
| 2.537942 | 5.8075996 | PROMOTEI | 973.8746 | 2.0070424 | 4.0195734 | 539 |
| 2.1702523 | 4.501021 | PROMOTEI | 1149.92 | 1.3778803 | 2.5988625 | 2223 |
| 2.1258173 | 4.3645028 | PROMOTER | | 1.5533968 | 2.9350738 | 1480 |
| 2.2497253 | 4.7559228 | PROMOTEI | 2935.546 | 2.247176 | 4.7475263 | 1279 |
| 1.9066759 | 3.749442 | PROMOTEI | 444.7851 | 1.948182 | 3.8588795 | 2378 |
| 2.02206 | 4.0616333 | PROMOTEI | 113.6103 | 1.9020437 | 3.7374226 | 1608 |
| 1.8931478 | 3.7144479 | PROMOTEI | 376.6185 | 1.2265995 | 2.3401476 | 3000 |
| 2.509885 | 5.6957467 | PROMOTER | | 2.0836833 | 4.2388805 | 897 |
| 1.935264 | 3.8244811 | PROMOTER | | | | |
| 2.186145 | 4.5508783 | PROMOTEI | 173.4413 | 2.0051248 | 4.0142342 | 551 |
| 2.077637 | 4.2211526 | PROMOTEI | 176.4863 | 1.4758872 | 2.7815465 | 2983 |
| 1.8575015 | 3.6237954 | PROMOTEI | 301.5748 | 1.2759472 | 2.4215775 | 3891 |
| 2.2892432 | 4.8879963 | PROMOTEI | 501.6616 | 2.256691 | 4.7789411 | 1808 |
| 2.5398488 | 5.8152806 | PROMOTEI | 333.4167 | 2.1551757 | 4.4542289 | 1385 |
| 2.2367632 | 4.7133839 | PROMOTEI | 288.243 | 2.0062385 | 4.0173342 | 1342 |

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|---|---|---|---|---|---|---|
| 2.0903842 | 4.2586147 | PROMOTEI | 369.0286 | 1.9576155 | 3.8841946 | 957 |
| 1.8917494 | 3.7108493 | PROMOTEI | 1640.692 | 1.622651 | 3.0794037 | 1675 |
| 2.531921 | 5.7834125 | PROMOTEI | 181.9257 | | | |
| 1.7297696 | 3.3167485 | PROMOTEI | 1344.734 | 1.9433007 | 3.8458452 | 1908 |
| 1.669031 | 3.1800093 | PROMOTER | | 2.2774093 | 4.8480659 | 1907 |
| 1.8625445 | 3.6364847 | PROMOTER | | 1.5386674 | 2.9052602 | 4041 |
| 1.5940393 | 3.0189342 | PROMOTER | | 1.2959498 | 2.4553859 | 3073 |
| 2.4109392 | 5.3182043 | DIVERGENT_PROMOT | | 1.8477376 | 3.599353 | 1394 |
| 1.9929488 | 3.9804976 | PROMOTEI | 1211.076 | 1.459852 | 2.7508014 | 4089 |
| 2.2678556 | 4.8160675 | PROMOTER | | 1.5069968 | 2.8421778 | 2313 |
| 2.06791 | 4.1927883 | PROMOTER | | | | |
| 2.0290098 | 4.0812464 | PROMOTEI | 256.9486 | 1.3205358 | 2.4975885 | 2130 |
| 2.3128235 | 4.9685452 | PROMOTEI | 125.1904 | 1.6497856 | 3.13787 | 4539 |
| 2.6898832 | 6.4526117 | DIVERGENT_PROMOT | | 1.6356105 | 3.1071901 | 3271 |
| 1.716708 | 3.2868554 | PROMOTEI | 1658.48 | 1.6515857 | 3.1417877 | 264 |
| 1.9051644 | 3.7455158 | PROMOTER | | 1.984203 | 3.9564403 | 192 |
| 2.630941 | 6.1942989 | PROMOTEI | 163.6773 | 1.8508232 | 3.6070594 | 3605 |
| 2.1192303 | 4.3446209 | PROMOTEI | 244.8761 | 1.4351203 | 2.7040471 | 1626 |
| 2.0775888 | 4.2210116 | PROMOTER | | 2.2191951 | 4.6563358 | 947 |
| 2.4880712 | 5.6102739 | DIVERGENT_PROMOT | | 1.6466799 | 3.1311224 | 4172 |
| 2.2685344 | 4.818334 | DIVERGENT_PROMOT | | 1.8237758 | 3.5400649 | 838 |
| 2.1902237 | 4.5637625 | PROMOTEI | 223.2497 | | | |
| 2.4515707 | 5.4701132 | PROMOTEI | 707.7473 | 1.654506 | 3.1481537 | 1636 |
| 2.1752348 | 4.5165926 | PROMOTEI | 989.2037 | 1.7827308 | 3.4407684 | 1549 |
| 2.344139 | 5.0775727 | PROMOTER | | 1.7567878 | 3.3794484 | 3537 |
| 2.2135723 | 4.6382234 | PROMOTEI | 459.26 | 1.7680347 | 3.4058967 | 3136 |
| 2.4809585 | 5.5826825 | PROMOTER | | 1.6482974 | 3.1346349 | 3124 |
| 2.1881933 | 4.5573441 | PROMOTEI | 966.6719 | 1.7845759 | 3.4451717 | 554 |
| 1.6025627 | 3.0368227 | PROMOTEI | 144.1038 | 1.4121169 | 2.6612737 | 2496 |
| 2.4628444 | 5.513026 | PROMOTEI | 372.3988 | 1.6172857 | 3.0679728 | 3766 |
| 1.6912768 | 3.2294238 | PROMOTER | | 1.9342188 | 3.8217113 | 3159 |
| 1.756663 | 3.3791561 | DIVERGENT_PROMOT | | 1.6184629 | 3.0704772 | 1518 |
| 2.3683653 | 5.1635572 | DIVERGENT_PROMOT | | 1.8906579 | 3.7080428 | 3757 |
| 2.5473375 | 5.8455448 | PROMOTER | | 1.3419669 | 2.5349669 | 2751 |
| 2.5932317 | 6.0344894 | PROMOTEI | 201.818 | 1.6091444 | 3.0507086 | 4940 |
| 2.2709188 | 4.826304 | PROMOTEI | 181.8903 | 1.8555028 | 3.6187785 | 2236 |
| 2.272556 | 4.8317841 | PROMOTEI | 238.726 | 1.742721 | 3.3466577 | 402 |
| 1.6955928 | 3.2390995 | PROMOTEI | 166.3498 | 1.8544827 | 3.6162206 | 508 |
| 2.3870065 | 5.230709 | PROMOTEI | 120.4323 | 2.0158143 | 4.0440877 | 844 |
| 2.1371894 | 4.3990421 | PROMOTEI | 321.658 | 1.648637 | 3.1353728 | 4081 |
| 2.0525794 | 4.1484701 | PROMOTEI | 189.3149 | 1.829316 | 3.5536855 | 636 |
| 2.0874677 | 4.2500143 | PROMOTER | | 1.7744666 | 3.421115 | 1023 |
| 2.1267617 | 4.3673607 | PROMOTER | | 1.0631249 | 2.0894524 | 2448 |
| 2.0888615 | 4.2541223 | PROMOTEI | 552.0788 | 1.6913029 | 3.2294823 | 560 |
| 1.804018 | 3.4919139 | PROMOTEI | 292.4643 | 1.3964494 | 2.632529 | 2531 |
| 2.0570822 | 4.1614382 | PROMOTEI | 261.6558 | 2.1223013 | 4.353879 | 790 |
| 1.665129 | 3.1714201 | PROMOTEI | 166.8786 | 1.177756 | 2.2622463 | 4936 |
| 1.779433 | 3.4329123 | PROMOTER | | | | |
| 1.7729421 | 3.4175018 | PROMOTEI | 1114.894 | 1.4076294 | 2.6530087 | 2623 |
| 1.7286869 | 3.3142603 | PROMOTEI | 487.7001 | 1.1906351 | 2.282532 | 2190 |
| 2.4770052 | 5.5674056 | PROMOTEI | 331.7652 | | | |
| 2.0167568 | 4.0467306 | PROMOTER | | 1.671989 | 3.1865361 | 2826 |
| 2.3010995 | 4.9283322 | PROMOTEI | 199.1546 | 1.6357889 | 3.1075743 | 2066 |
| 2.5493214 | 5.8535888 | PROMOTEI | 360.6487 | 2.1619039 | 4.4750503 | 531 |
| 1.913066 | 3.7660861 | PROMOTEI | 436.7241 | 1.6002544 | 3.0319677 | 974 |
| 1.9688483 | 3.914555 | PROMOTER | | 1.666196 | 3.1737665 | 1213 |
| 1.6754664 | 3.194226 | PROMOTEI | 202.681 | 1.9123582 | 3.7642389 | 1067 |
| 1.9640538 | 3.9015673 | PROMOTEI | 283.9656 | 1.8760622 | 3.6707178 | 1098 |

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|---|---|---|---|---|---|---|
| 2.0355449 | 4.0997755 | PROMOTEI | 108.3109 | 1.6164429 | 3.0661811 | 3751 |
| 2.3941 | 5.2564908 | PROMOTER | | 1.7023778 | 3.2543689 | 2821 |
| 1.8580955 | 3.6252877 | PROMOTEI | 363.7543 | 1.4478409 | 2.7279948 | 696 |
| 2.1952965 | 4.5798378 | PROMOTER | | | | |
| 1.8566278 | 3.6216015 | PROMOTEI | 529.8228 | 1.5303957 | 2.8886506 | 3381 |
| 1.9646432 | 3.9031616 | PROMOTEI | 991.4445 | 1.3758476 | 2.5952034 | 3637 |
| 1.8529794 | 3.6124545 | PROMOTEI | 127.1122 | | | |
| 2.163723 | 4.4806965 | PROMOTEI | 178.7713 | 1.4296153 | 2.6937488 | 2685 |
| 2.2716906 | 4.8288867 | PROMOTEI | 252.2342 | 2.4759798 | 5.56345 | 499 |
| 2.0116348 | 4.0323889 | PROMOTEI | 234.7794 | 1.4824309 | 2.7941915 | 3791 |
| 1.9784276 | 3.9406336 | DIVERGENT_PROMOTER | | | | |
| 1.6840545 | 3.2132974 | PROMOTEI | 3726.071 | 1.7451519 | 3.3523015 | 2062 |
| 2.023671 | 4.0661713 | PROMOTEI | 102.9169 | 1.664378 | 3.1697696 | 2431 |
| 1.5928344 | 3.0164139 | PROMOTER | | 1.5908729 | 3.0123155 | 3502 |
| 2.2898839 | 4.8901676 | DIVERGENT_PROMOT | | 2.2190351 | 4.6558194 | 413 |
| 1.9509032 | 3.866165 | PROMOTEI | 308.9102 | 1.4987069 | 2.8258931 | 203 |
| 2.4352546 | 5.4085977 | PROMOTEI | 225.1925 | 2.0289893 | 4.0811884 | 3473 |
| 2.5577528 | 5.8878985 | PROMOTEI | 2314.035 | 2.1225595 | 4.3546582 | 521 |
| 1.9255307 | 3.7987656 | PROMOTEI | 222.0645 | 0.9854198 | 1.9798893 | 2764 |
| 2.2653515 | 4.8077154 | PROMOTER | | 1.8245631 | 3.5419973 | 3878 |
| 2.0141773 | 4.0395016 | PROMOTEI | 143.6874 | 1.8554254 | 3.6185843 | 2294 |
| 1.7304926 | 3.318411 | PROMOTER | | | | |
| 2.2156136 | 4.6447907 | PROMOTEI | 843.5709 | 1.682198 | 3.2091651 | 3280 |
| 2.276292 | 4.8443127 | PROMOTEI | 194.7737 | 2.0905464 | 4.2590935 | 2089 |
| 2.2030141 | 4.604403 | PROMOTEI | 108.6247 | 1.6234506 | 3.0811109 | 2822 |
| 1.9234511 | 3.7932938 | PROMOTEI | 1270.613 | 1.7566435 | 3.3791104 | 1473 |
| 1.7536075 | 3.3720069 | PROMOTEI | 382.3934 | 1.6564875 | 3.1524806 | 472 |
| 2.1103134 | 4.3178508 | PROMOTEI | 498.326 | 1.8458005 | 3.5945234 | 698 |
| 2.0598657 | 4.1694749 | PROMOTER | | 1.9706272 | 3.9193847 | 3242 |
| 1.8391749 | 3.5780534 | PROMOTEI | 1099.776 | 1.4440737 | 2.7208807 | 3025 |
| 1.9036074 | 3.7414757 | PROMOTER | | 1.7485924 | 3.3603055 | 1633 |
| 2.3348289 | 5.0449113 | DIVERGENT_PROMOT | | 2.406788 | 5.3029237 | 840 |
| 2.277784 | 4.8493252 | PROMOTEI | 126.5289 | | | |
| 1.7118388 | 3.2757808 | DIVERGENT_PROMOT | | 1.2630974 | 2.4001048 | 4031 |
| 2.193629 | 4.5745474 | PROMOTEI | 1143.589 | | | |
| 2.3287976 | 5.0238647 | PROMOTEI | 1913.052 | 1.5519778 | 2.9321884 | 1253 |
| 2.2691398 | 4.8203563 | PROMOTER | | 2.1969988 | 4.5852449 | 2268 |
| 2.2383924 | 4.7187096 | PROMOTEI | 1256.333 | 2.0913296 | 4.2614063 | 1005 |
| 2.1825275 | 4.5394814 | PROMOTEI | 177.8335 | 1.4645433 | 2.7597609 | 1134 |
| 2.1065073 | 4.3064745 | PROMOTER | | 1.6227336 | 3.07958 | 4844 |
| 1.9682083 | 3.9128188 | PROMOTEI | 273.3061 | 1.511287 | 2.8506423 | 2386 |
| 1.9382373 | 3.8323712 | PROMOTEI | 2968.167 | 2.3068104 | 4.9478796 | 200 |
| 1.93827 | 3.832458 | PROMOTEI | 217.5818 | 1.336044 | 2.5245811 | 4375 |
| 1.7579206 | 3.382103 | PROMOTEI | 335.0933 | 1.7126733 | 3.2776761 | 669 |
| 2.1340992 | 4.3896296 | PROMOTEI | 954.3102 | 1.4299107 | 2.6943004 | 2835 |
| 2.1446455 | 4.4218359 | PROMOTEI | 199.0596 | 1.6364803 | 3.109064 | 1501 |
| 1.7821429 | 3.4393666 | PROMOTEI | 1216.038 | 1.4192134 | 2.6743966 | 843 |
| 2.381033 | 5.2090959 | PROMOTEI | 349.8228 | 1.6994979 | 3.247879 | 1210 |
| 1.9781846 | 3.9399699 | PROMOTEI | 147.0826 | 1.5280788 | 2.8840153 | 2483 |
| 1.9342232 | 3.821723 | PROMOTEI | 127.341 | 1.5914534 | 3.0135279 | 3673 |
| 2.3723433 | 5.1778146 | PROMOTEI | 275.0907 | 1.9173077 | 3.7771752 | 1154 |
| 2.191852 | 4.5689163 | PROMOTEI | 305.6624 | 1.6130427 | 3.0589631 | 1785 |
| 2.2741995 | 4.8372916 | PROMOTEI | 215.9091 | 1.8538513 | 3.6146383 | 2720 |
| 1.8393613 | 3.5785157 | PROMOTEI | 217.8988 | 1.5196469 | 2.8672087 | 2588 |
| 2.3695624 | 5.1678436 | PROMOTEI | 585.1212 | 1.9026936 | 3.7391066 | 2359 |
| 2.1592357 | 4.4667815 | PROMOTEI | 178.711 | 1.686266 | 3.2182268 | 651 |
| 2.3907163 | 5.2441767 | PROMOTER | | 2.2627556 | 4.7990725 | 324 |
| 2.245622 | 4.7424153 | PROMOTER | | | | |

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|---|---|---|---|---|---|---|
| 2.52901 | 5.7717548 | PROMOTER | | 1.8111907 | 3.509318 | 2667 |
| 2.171687 | 4.5054993 | PROMOTER | | 1.5906941 | 3.0119422 | 3747 |
| 1.7003372 | 3.2497691 | PROMOTEI | 6258.366 | 1.919781 | 3.7836562 | 242 |
| 2.0697114 | 4.1980269 | PROMOTEI | 1639.165 | | | |
| 2.1087587 | 4.3132003 | PROMOTER | | 1.4999255 | 2.8282811 | 1467 |
| 2.1040683 | 4.2992002 | PROMOTER | | 1.8117368 | 3.5106467 | 403 |
| 2.0589542 | 4.1668414 | PROMOTER | | 1.9057878 | 3.7471346 | 3230 |
| 2.1930504 | 4.5727131 | PROMOTER | | 1.6282282 | 3.0913311 | 5176 |
| 2.4754868 | 5.5615492 | PROMOTEI | 864.9915 | 2.0652473 | 4.1850571 | 3803 |
| 1.7560345 | 3.3776843 | PROMOTEI | 413.3716 | 1.9389931 | 3.8343794 | 914 |
| 1.9278314 | 3.8048284 | PROMOTEI | 203.6267 | | | |
| 2.1959941 | 4.5820529 | PROMOTEI | 707.666 | 1.5771707 | 2.9838411 | 4326 |
| 1.7139641 | 3.28061 | PROMOTEI | 132.0355 | 1.6120569 | 3.0568736 | 540 |
| 1.6861794 | 3.2180336 | PROMOTEI | 112.8122 | 1.2266868 | 2.3402892 | 5047 |
| 2.4631987 | 5.51438 | PROMOTER | | | | |
| 2.0261552 | 4.073179 | PROMOTEI | 2575.444 | 1.936159 | 3.8268544 | 2946 |
| 1.9269931 | 3.8026182 | PROMOTEI | 127.9797 | 1.223885 | 2.3357486 | 3851 |
| 1.9344305 | 3.8222721 | PROMOTEI | 154.8084 | 1.145752 | 2.2126143 | 2841 |
| 2.1729221 | 4.5093582 | PROMOTEI | 297.8694 | 1.4715995 | 2.773292 | 5570 |
| 2.188765 | 4.5591504 | PROMOTEI | 851.0921 | 1.4636633 | 2.7580781 | 3672 |
| 2.2722285 | 4.8306874 | PROMOTEI | 13488.31 | 1.8959414 | 3.7216475 | 2877 |
| 2.8497946 | 7.2089773 | PROMOTEI | 76.9155 | 1.3566988 | 2.560985 | 4416 |
| 2.0708969 | 4.2014779 | PROMOTEI | 860.8332 | 2.0554833 | 4.1568287 | 358 |
| 2.193446 | 4.5739671 | PROMOTEI | 295.1817 | 2.1190803 | 4.3441692 | 880 |
| 1.9223348 | 3.7903598 | PROMOTEI | 274.4572 | 1.986533 | 3.9628353 | 1062 |
| 2.254632 | 4.7721256 | PROMOTER | | 1.7201377 | 3.2946785 | 1141 |
| 1.9107524 | 3.7600514 | PROMOTEI | 192.0076 | 1.5629681 | 2.9546108 | 3622 |
| 1.8074282 | 3.5001778 | PROMOTEI | 223.9659 | | | |
| 1.9831808 | 3.953638 | PROMOTEI | 155.1674 | 1.6795541 | 3.2032893 | 1336 |
| 1.8131156 | 3.5140034 | PROMOTEI | 240.6488 | 1.8618517 | 3.6347388 | 2079 |
| 1.7941998 | 3.4682305 | PROMOTEI | 103.7495 | | | |
| 2.031921 | 4.0894902 | PROMOTEI | 138.19 | 1.7128239 | 3.2780183 | 2509 |
| 2.2429957 | 4.73379 | PROMOTER | | | | |
| 1.6010938 | 3.0337323 | PROMOTEI | 320.0715 | 1.3602674 | 2.5673276 | 3555 |
| 2.0498703 | 4.1406874 | PROMOTEI | 251.6095 | | | |
| 2.0150945 | 4.0420705 | PROMOTEI | 588.8972 | 1.5809469 | 2.9916614 | 3482 |
| 2.1061118 | 4.3052941 | PROMOTEI | 143.5876 | 1.923363 | 3.7930621 | 1378 |
| 2.4373734 | 5.4165469 | PROMOTEI | 348.2357 | 2.02967 | 4.0831144 | 397 |
| 1.7347952 | 3.3283224 | PROMOTER | | 1.3535287 | 2.5553638 | 2770 |
| 1.9983925 | 3.9955455 | PROMOTEI | 280.5894 | 1.8948258 | 3.7187707 | 981 |
| 2.4113295 | 5.3196433 | PROMOTEI | 165.8085 | 1.8327447 | 3.5621412 | 2659 |
| 2.4039721 | 5.2925834 | PROMOTER | | 2.0530076 | 4.1497016 | 446 |
| 2.3049183 | 4.9413947 | PROMOTEI | 4656.197 | 2.3500788 | 5.098521 | 60 |
| 2.3713758 | 5.1743434 | PROMOTEI | 2939.857 | 1.8957505 | 3.721155 | 2525 |
| 1.7310016 | 3.319582 | PROMOTEI | 171.3057 | 1.7548721 | 3.374964 | 1110 |
| 1.9819922 | 3.9503821 | PROMOTEI | 258.9309 | 2.0500195 | 4.1411157 | 1565 |
| 1.5962801 | 3.0236268 | PROMOTEI | 127.2222 | 1.7546133 | 3.3743586 | 2528 |
| 2.5763955 | 5.9644764 | PROMOTER | | 1.2868934 | 2.4400207 | 5567 |
| 1.9734364 | 3.927024 | PROMOTEI | 336.7737 | 1.3813758 | 2.6051669 | 1243 |
| 1.9941695 | 3.983867 | PROMOTEI | 112.3844 | 1.6958103 | 3.2395879 | 1293 |
| 2.1947064 | 4.5779649 | PROMOTEI | 1948.762 | 2.0986993 | 4.2832304 | 257 |
| 1.9341487 | 3.8215256 | PROMOTEI | 217.7913 | 1.1730446 | 2.2548705 | 3196 |
| 1.7111374 | 3.2741885 | DIVERGENT_PROMOT | | 1.2666682 | 2.4060526 | 4153 |
| 2.259046 | 4.7867485 | PROMOTER | | 1.4462162 | 2.7249244 | 590 |
| 1.7960513 | 3.4726844 | PROMOTER | | 1.2254666 | 2.3383106 | 2987 |
| 1.6378238 | 3.1119606 | PROMOTER | | 1.5750128 | 2.9793814 | 3501 |
| 1.6968248 | 3.2418668 | PROMOTEI | 131.2019 | 1.529382 | 2.8866216 | 4764 |
| 2.2576895 | 4.7822498 | PROMOTER | | 1.7588077 | 3.3841833 | 3564 |

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|---|---|---|---|---|---|---|
| 2.1085198 | 4.3124861 | PROMOTEI | 173.0345 | 1.6519648 | 3.1426134 | 3414 |
| 2.0724335 | 4.2059552 | PROMOTEI | 412.7881 | 1.6250176 | 3.0844593 | 4173 |
| 2.2137346 | 4.6387452 | PROMOTER | | 1.4383307 | 2.7100711 | 3974 |
| 2.302209 | 4.9321238 | PROMOTER | | 1.610852 | 3.0543216 | 4409 |
| 1.8854921 | 3.6947893 | PROMOTEI | 188.8511 | 1.2723289 | 2.4155118 | 3964 |
| 2.5222235 | 5.7446679 | PROMOTEI | 1663.806 | 2.1376493 | 4.4004446 | 680 |
| 2.3656268 | 5.1537652 | PROMOTER | | 0.9086112 | 1.8772376 | 3616 |
| 1.7880198 | 3.4534056 | PROMOTER | | 1.6025336 | 3.0367615 | 1423 |
| 2.5755663 | 5.9610493 | PROMOTEI | 1263.551 | 1.871605 | 3.6593946 | 2208 |
| 2.0588162 | 4.1664429 | PROMOTEI | 1160.359 | 1.4131464 | 2.6631735 | 5410 |
| 1.800735 | 3.4839768 | PROMOTEI | 159.1432 | 1.7356906 | 3.3303888 | 1628 |
| 2.7738192 | 6.8391603 | PROMOTEI | 186.5042 | 1.6730691 | 3.1889226 | 2786 |
| 2.067793 | 4.1924483 | PROMOTER | | 1.5947553 | 3.0204328 | 236 |
| 2.2563975 | 4.777969 | PROMOTEI | 110.9807 | 2.0769958 | 4.219277 | 1195 |
| 2.3824015 | 5.2140395 | PROMOTEI | 830.9446 | 1.8302577 | 3.5560059 | 701 |
| 1.8733019 | 3.6637013 | PROMOTEI | 130.7865 | 1.7638677 | 3.3960735 | 1460 |
| 2.1205308 | 4.3485391 | PROMOTEI | 815.5103 | 1.6011555 | 3.0338621 | 3293 |
| 2.0946703 | 4.2712854 | PROMOTER | | 1.2016029 | 2.2999506 | 3456 |
| 2.14372 | 4.4190002 | PROMOTEI | 870.1777 | 1.5794513 | 2.9885616 | 1145 |
| 2.3639016 | 5.1476059 | PROMOTEI | 157.1127 | | | |
| 2.0173059 | 4.0482711 | PROMOTEI | 265.7877 | 1.5776769 | 2.9848882 | 2464 |
| 2.046362 | 4.1306305 | PROMOTEI | 182.9944 | 1.9297782 | 3.8099662 | 3366 |
| 2.3058057 | 4.9444351 | PROMOTEI | 280.1201 | 1.3676068 | 2.5804216 | 2414 |
| 2.0068629 | 4.0190733 | PROMOTEI | 426.1135 | 1.5242604 | 2.8763922 | 1568 |
| 1.7190093 | 3.2921026 | PROMOTEI | 213.7038 | 1.1154348 | 2.166603 | 4111 |
| 1.7905983 | 3.4595834 | PROMOTEI | 136.639 | 1.6687429 | 3.1793744 | 4440 |
| 1.8589746 | 3.6274974 | DIVERGENT_PROMOT | | 1.8120309 | 3.5113624 | 3191 |
| 2.680262 | 6.4097229 | PROMOTER | | 1.7429413 | 3.3471688 | 3060 |
| 1.8643342 | 3.6409986 | PROMOTEI | 97.3726 | 1.4211025 | 2.6779008 | 4286 |
| 2.0351171 | 4.0985599 | DIVERGENT_PROMOT | | 1.6384951 | 3.113409 | 1373 |
| 2.0212615 | 4.0593859 | PROMOTEI | 196.2072 | 1.9029328 | 3.7397266 | 2140 |
| 2.7951899 | 6.9412231 | PROMOTER | | 1.6719979 | 3.1865557 | 1054 |
| 1.894605 | 3.7182016 | PROMOTEI | 4040.948 | 2.080764 | 4.2303118 | 359 |
| 2.1229873 | 4.3559497 | DIVERGENT_PROMOTER | | | | |
| 2.4017723 | 5.2845195 | PROMOTEI | 197.3252 | 2.20256 | 4.6029539 | 1289 |
| 2.3515983 | 5.1038938 | PROMOTER | | 1.7223264 | 3.2996806 | 642 |
| 2.3918312 | 5.2482309 | PROMOTEI | 1961.677 | 1.6122007 | 3.0571783 | 864 |
| 2.5843437 | 5.997427 | PROMOTEI | 226.9961 | 2.175498 | 4.5174167 | 1366 |
| 1.9864541 | 3.9626186 | DIVERGENT_PROMOT | | 1.1491526 | 2.2178359 | 1512 |
| 2.0326698 | 4.0916133 | PROMOTEI | 184.8454 | 1.9010817 | 3.7349313 | 3388 |
| 2.4891741 | 5.6145644 | PROMOTEI | 181.6756 | 1.4567711 | 2.7449333 | 2799 |
| 2.9316845 | 7.6300076 | PROMOTER | | 2.3954692 | 5.2614819 | 3228 |
| 1.8135544 | 3.5150724 | PROMOTEI | 177.8609 | 1.1702074 | 2.2504405 | 3202 |
| 2.1869946 | 4.5535591 | PROMOTER | | 1.7024075 | 3.2544359 | 2520 |
| 2.5563118 | 5.8820204 | PROMOTER | | 2.135069 | 4.3925813 | 3544 |
| 1.5979884 | 3.0272092 | PROMOTEI | 1470.823 | 1.3981494 | 2.6356328 | 3352 |
| 2.269404 | 4.8212392 | PROMOTEI | 122.8532 | 2.1223123 | 4.3539122 | 595 |
| 2.2797158 | 4.8558229 | PROMOTER | | 1.9341836 | 3.8216181 | 1574 |
| 2.0216782 | 4.0605586 | PROMOTER | | 1.8819869 | 3.6858233 | 1744 |
| 2.2993617 | 4.9223993 | PROMOTEI | 461.3543 | 1.5510781 | 2.9303604 | 2310 |
| 1.8055428 | 3.4956065 | PROMOTER | | 2.031613 | 4.0886172 | 1787 |
| 1.7788135 | 3.4314385 | PROMOTEI | 145.7537 | 1.4861131 | 2.8013322 | 3658 |
| 2.5035715 | 5.6708756 | PROMOTEI | 106.8174 | 1.7958113 | 3.4721067 | 3005 |
| 1.8187588 | 3.5277756 | PROMOTEI | 675.5691 | 1.29504 | 2.453838 | 3067 |
| 2.2995718 | 4.9231162 | PROMOTEI | 172.9444 | 1.3784446 | 2.5998792 | 4171 |
| 2.3416877 | 5.0689527 | PROMOTEI | 193.5536 | 1.6234928 | 3.081201 | 3852 |
| 2.1512628 | 4.4421644 | DIVERGENT_PROMOT | | 1.375376 | 2.5943552 | 4004 |
| 2.6849024 | 6.4303729 | PROMOTEI | 1002.816 | 2.0804515 | 4.2293956 | 2573 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.2863405 | 4.8781716 | PROMOTER | | 1.5492413 | 2.9266319 | 1749 |
| 1.7289729 | 3.3149173 | PROMOTER | | 1.7213213 | 3.2973826 | 2817 |
| 2.330675 | 5.0304065 | PROMOTEI | 1812.044 | 1.9781667 | 3.939921 | 1599 |
| 1.8553314 | 3.6183486 | PROMOTEI | 269.1726 | 1.3756956 | 2.59493 | 3003 |
| 2.0266705 | 4.0746341 | PROMOTEI | 201.4943 | | | |
| 2.422019 | 5.359205 | PROMOTER | | 1.5376742 | 2.9032609 | 1931 |
| 2.0416856 | 4.117263 | DIVERGENT_PROMOT | | 1.3458089 | 2.5417267 | 1754 |
| 2.0233576 | 4.0652881 | PROMOTEI | 494.0114 | | | |
| 2.2473965 | 4.748252 | PROMOTEI | 619.2216 | 1.6801646 | 3.2046451 | 1637 |
| 2.4906845 | 5.6204455 | PROMOTEI | 393.4145 | 1.6549859 | 3.1492011 | 2126 |
| 2.5204797 | 5.7377285 | PROMOTEI | 1489.153 | 1.4572572 | 2.7458583 | 846 |
| 1.7660618 | 3.4012423 | PROMOTER | | 1.4779017 | 2.7854332 | 4978 |
| 2.3650503 | 5.1517061 | PROMOTEI | 138.9749 | 1.6847495 | 3.2148457 | 4729 |
| 2.1287615 | 4.3734188 | DIVERGENT_PROMOT | | 1.6321236 | 3.0996893 | 4822 |
| 2.4333293 | 5.4013847 | PROMOTEI | 129.4601 | | | |
| 1.9364984 | 3.8277548 | PROMOTER | | 1.1240071 | 2.179515 | 2210 |
| 1.8982892 | 3.7277089 | PROMOTEI | 1023.471 | 1.7691833 | 3.4086094 | 254 |
| 2.4425921 | 5.4361758 | PROMOTEI | 240.4068 | | | |
| 1.8307248 | 3.5571574 | DIVERGENT_PROMOT | | 1.5116277 | 2.8513155 | 3553 |
| 2.1836488 | 4.543011 | PROMOTEI | 471.9194 | 2.5640886 | 5.9138129 | 344 |
| 2.5328782 | 5.7872509 | PROMOTEI | 816.048 | 1.9455179 | 3.8517602 | 2100 |
| 2.8864117 | 7.3942904 | PROMOTEI | 183.6019 | | | |
| 2.262616 | 4.7986081 | PROMOTER | | 1.8569124 | 3.622316 | 1543 |
| 2.2417145 | 4.729588 | PROMOTEI | 971.1636 | 1.7329576 | 3.3240858 | 3657 |
| 1.8072114 | 3.4996518 | PROMOTEI | 671.4473 | 1.6444616 | 3.1263116 | 2413 |
| 2.2977958 | 4.9170595 | PROMOTEI | 2956.742 | 1.0704597 | 2.1001024 | 4990 |
| 1.6346159 | 3.1050487 | PROMOTER | | | | |
| 1.6408911 | 3.118584 | PROMOTEI | 153.1858 | 1.8671159 | 3.6480257 | 1536 |
| 1.7014625 | 3.2523049 | PROMOTEI | 314.3854 | 1.1043782 | 2.1500619 | 5446 |
| 1.7872599 | 3.4515871 | PROMOTER | | 1.8009117 | 3.4844035 | 3919 |
| 2.3918564 | 5.2483226 | PROMOTER | | 2.1240387 | 4.3591254 | 1404 |
| 1.6818639 | 3.208422 | PROMOTEI | 85.70098 | | | |
| 1.8937547 | 3.7160108 | PROMOTEI | 168.5201 | 1.5451913 | 2.9184276 | 1399 |
| 2.5268161 | 5.7629843 | PROMOTEI | 591.592 | 2.0133235 | 4.0371117 | 2251 |
| 2.697966 | 6.4888643 | PROMOTEI | 405.7925 | 1.8148406 | 3.5182076 | 3606 |
| 1.6432734 | 3.1237379 | PROMOTEI | 863.299 | 1.619036 | 3.0716972 | 2327 |
| 1.9954851 | 3.9875016 | PROMOTER | | 1.8156251 | 3.5201212 | 4070 |
| 2.315572 | 4.9780199 | PROMOTER | | 1.140114 | 2.2039844 | 4584 |
| 1.8110467 | 3.5089678 | PROMOTEI | 139.8878 | 1.3845499 | 2.6109049 | 5445 |
| 1.768006 | 3.405829 | PROMOTER | | 1.8222865 | 3.5364123 | 1884 |
| 2.4510233 | 5.4680381 | PROMOTEI | 764.2677 | 1.5468706 | 2.9218267 | 967 |
| 2.2243328 | 4.6729474 | PROMOTEI | 275.1096 | 1.7298833 | 3.3170099 | 1794 |
| 1.9469241 | 3.8555164 | PROMOTER | | | | |
| 1.9224653 | 3.7907027 | PROMOTEI | 215.1919 | 1.6362671 | 3.1086045 | 1743 |
| 2.286059 | 4.8772198 | PROMOTEI | 96.24478 | 1.3378334 | 2.5277143 | 4123 |
| 2.4106004 | 5.3169555 | PROMOTEI | 1556.891 | 1.9258908 | 3.7997139 | 839 |
| 2.0368955 | 4.1036153 | PROMOTER | | 1.3134028 | 2.4852704 | 3771 |
| 2.163349 | 4.4795351 | PROMOTEI | 120.6149 | 1.8948203 | 3.7187565 | 3053 |
| 1.6740171 | 3.1910188 | PROMOTEI | 106.6046 | 1.6444584 | 3.1263047 | 4847 |
| 1.9446615 | 3.8494745 | PROMOTEI | 499.506 | 1.6859243 | 3.2174647 | 3037 |
| 1.7193086 | 3.2927856 | PROMOTER | | | | |
| 2.0069678 | 4.0193656 | PROMOTEI | 354.1346 | | | |
| 1.703222 | 3.2562738 | PROMOTEI | 141.99 | | | |
| 1.8312148 | 3.5583657 | PROMOTEI | 282.303 | 1.2124826 | 2.3173607 | 3874 |
| 1.8957893 | 3.7212551 | PROMOTEI | 133.8385 | 1.4143119 | 2.6653258 | 5011 |
| 1.809831 | 3.5060122 | PROMOTER | | 1.6031443 | 3.0380472 | 4176 |
| 2.000283 | 4.0007847 | PROMOTEI | 922.3038 | 2.264903 | 4.806221 | 1778 |
| 1.9066889 | 3.7494758 | PROMOTEI | 11311.83 | 1.9266405 | 3.801689 | 103 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.8768748 | 3.6727859 | PROMOTER | | 1.2825737 | 2.4327258 | 5244 |
| 2.958422 | 7.7727332 | PROMOTEI | 205.5009 | 1.3217703 | 2.4997266 | 1392 |
| 2.1416135 | 4.4125527 | PROMOTER | | 2.166688 | 4.4899146 | 2688 |
| 1.7377224 | 3.3350824 | PROMOTER | | 1.5134587 | 2.8549366 | 454 |
| 1.8984231 | 3.7280549 | PROMOTEI | 729.2892 | 1.4896818 | 2.8082703 | 1733 |
| 1.9524102 | 3.8702056 | DIVERGENT_PROMOT | | 1.3580216 | 2.5633342 | 4229 |
| 2.6173203 | 6.1360928 | PROMOTEI | 724.4135 | 1.8343656 | 3.5661456 | 2839 |
| 2.2266285 | 4.6803892 | PROMOTER | | 1.1352776 | 2.1966083 | 2402 |
| 1.995099 | 3.9864346 | PROMOTER | | | | |
| 2.4667199 | 5.5278555 | PROMOTEI | 872.402 | 2.0119183 | 4.0331814 | 339 |
| 2.0814054 | 4.2321929 | PROMOTER | | 1.7138852 | 3.2804306 | 5438 |
| 2.1835837 | 4.542806 | DIVERGENT_PROMOT | | 1.809712 | 3.505723 | 282 |
| 1.9348965 | 3.823507 | PROMOTEI | 528.3964 | | | |
| 2.0735042 | 4.2090779 | PROMOTEI | 554.2599 | 2.336361 | 5.0502717 | 2193 |
| 1.8266134 | 3.5470346 | PROMOTEI | 231.7223 | 1.4986147 | 2.8257125 | 4259 |
| 3.0033562 | 8.0186324 | PROMOTEI | 181.1016 | 1.8147559 | 3.518001 | 3311 |
| 2.8608708 | 7.2645367 | PROMOTEI | 394.0499 | 1.8949621 | 3.7191221 | 1591 |
| 1.6160039 | 3.0652482 | DIVERGENT_PROMOT | | 1.3810124 | 2.6045108 | 3812 |
| 1.9911307 | 3.9754845 | PROMOTEI | 408.0121 | 1.645071 | 3.1276325 | 812 |
| 2.0599337 | 4.1696714 | PROMOTEI | 126.8617 | 1.6744897 | 3.1920643 | 3942 |
| 1.8999999 | 3.7321317 | PROMOTER | | 1.5768878 | 2.983256 | 3418 |
| 1.9775186 | 3.9381515 | DIVERGENT_PROMOT | | 1.5647851 | 2.9583343 | 3384 |
| 2.1352077 | 4.3930037 | PROMOTEI | 195.3805 | | | |
| 2.0344267 | 4.0965991 | PROMOTEI | 136.1205 | | | |
| 2.5758927 | 5.9623981 | PROMOTEI | 727.1005 | 1.7194121 | 3.2930219 | 3109 |
| 2.034872 | 4.0978637 | PROMOTEI | 96.22607 | | | |
| 2.3824048 | 5.2140514 | PROMOTEI | 167.0766 | 1.3722092 | 2.5886667 | 4025 |
| 1.7715492 | 3.4142039 | PROMOTEI | 363.6962 | 1.3918478 | 2.6241457 | 5059 |
| 2.0912461 | 4.2611596 | PROMOTEI | 368.0821 | 1.916421 | 3.7748544 | 4298 |
| 2.634767 | 6.2107479 | PROMOTEI | 912.3536 | 1.1492069 | 2.2179193 | 5276 |
| 1.8181163 | 3.5262049 | DIVERGENT_PROMOT | | 1.5180013 | 2.8639401 | 4264 |
| 1.86814 | 3.6506162 | PROMOTEI | 1243.954 | 1.4489696 | 2.7301299 | 2872 |
| 2.5196066 | 5.7342571 | PROMOTER | | 2.0538974 | 4.1522618 | 2265 |
| 2.229004 | 4.6881021 | PROMOTEI | 391.2604 | 1.9324327 | 3.8169828 | 1719 |
| 1.7976519 | 3.4765393 | PROMOTEI | 110.1176 | 1.5309802 | 2.8898211 | 2929 |
| 2.5374422 | 5.805588 | PROMOTEI | 1410.137 | 2.1188323 | 4.3434225 | 2408 |
| 2.7852142 | 6.8933927 | PROMOTER | | | | |
| 2.1931844 | 4.5731378 | PROMOTER | | | | |
| 2.0200338 | 4.0559329 | PROMOTEI | 464.8571 | 1.1133767 | 2.1635144 | 4614 |
| 2.384471 | 5.2215242 | PROMOTEI | 286.4463 | | | |
| 2.3058817 | 4.9446956 | PROMOTEI | 497.2812 | 1.966371 | 3.9078389 | 1377 |
| 2.0079875 | 4.0222075 | PROMOTER | | 1.2691451 | 2.410187 | 3833 |
| 1.6988505 | 3.2464219 | PROMOTEI | 573.8652 | 1.6087186 | 3.0498084 | 979 |
| 2.498252 | 5.6500044 | PROMOTEI | 863.8556 | 1.8361567 | 3.5705757 | 278 |
| 2.1332648 | 4.3870915 | DIVERGENT_PROMOT | | 1.5369107 | 2.9017248 | 1669 |
| 1.8205786 | 3.5322283 | PROMOTER | | 1.6168649 | 3.0670781 | 856 |
| 2.3041549 | 4.9387807 | PROMOTEI | 700.8199 | 1.4847615 | 2.798709 | 3664 |
| 2.0512276 | 4.1445849 | PROMOTER | | 1.6881623 | 3.2224597 | 4113 |
| 1.9704435 | 3.9188857 | PROMOTEI | 88.78243 | 1.4526005 | 2.7370096 | 5088 |
| 1.8332431 | 3.563372 | PROMOTER | | | | |
| 2.1656873 | 4.4868013 | PROMOTEI | 730.7578 | 1.8285767 | 3.5518649 | 3556 |
| 2.039511 | 4.1110616 | PROMOTER | | 2.282727 | 4.8659686 | 58 |
| 2.9405775 | 7.6771855 | PROMOTER | | 2.2488704 | 4.7531054 | 1402 |
| 1.7335628 | 3.3254805 | PROMOTER | | 1.4789793 | 2.7875145 | 3763 |
| 1.864356 | 3.6410537 | PROMOTER | | 1.7276106 | 3.3117886 | 2389 |
| 2.0530205 | 4.1497387 | PROMOTER | | 1.1047918 | 2.1506784 | 4242 |
| 2.2642837 | 4.8041583 | PROMOTEI | 613.741 | 1.9324613 | 3.8170585 | 751 |
| 1.8281279 | 3.5507601 | PROMOTEI | 696.3493 | | | |

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|---|---|---|---|---|---|---|
| 2.5008178 | 5.6600618 | PROMOTEI | 193.6667 | | | |
| 1.9593481 | 3.8888622 | PROMOTEI | 1734.761 | | | |
| 1.6928068 | 3.2328505 | PROMOTER | | 1.7691479 | 3.4085258 | 1421 |
| 1.7101833 | 3.2720239 | PROMOTEI | 502.2681 | | | |
| 1.685068 | 3.2155555 | PROMOTER | | 1.995972 | 3.9888476 | 2447 |
| 1.9695635 | 3.916496 | PROMOTER | | 1.5924149 | 3.0155369 | 5145 |
| 1.8602288 | 3.6306524 | PROMOTEI | 236.3873 | 1.4975579 | 2.8236434 | 3258 |
| 2.0369008 | 4.1036304 | PROMOTER | | 1.2935139 | 2.4512437 | 4532 |
| 1.664859 | 3.1708266 | PROMOTER | | | | |
| 1.6767617 | 3.1970952 | PROMOTER | | 1.5973598 | 3.0258905 | 1825 |
| 3.528277 | 11.537646 | PROMOTER | | 2.0402174 | 4.1130751 | 5581 |
| 2.3573399 | 5.1242466 | PROMOTER | | 2.0071824 | 4.0199635 | 3157 |
| 1.9653004 | 3.9049401 | PROMOTEI | 369.0428 | 2.158931 | 4.4658383 | 2869 |
| 1.5908664 | 3.012302 | PROMOTEI | 183.7687 | 1.2465295 | 2.3726997 | 1910 |
| 1.957219 | 3.8831273 | PROMOTEI | 131.0789 | | | |
| 2.0611954 | 4.1733196 | PROMOTEI | 94.43925 | 2.0899 | 4.2571856 | 5273 |
| 2.289155 | 4.8876975 | PROMOTER | | 1.9065443 | 3.7491 | 596 |
| 1.6974069 | 3.2431751 | PROMOTER | | | | |
| 1.7323897 | 3.3227775 | PROMOTEI | 466.0422 | 1.699783 | 3.2485209 | 679 |
| 2.2122917 | 4.6341081 | PROMOTER | | 1.5309577 | 2.8897761 | 4424 |
| 1.8442228 | 3.5905947 | PROMOTER | | 1.393219 | 2.6266409 | 1272 |
| 2.0111065 | 4.0309126 | PROMOTEI | 456.0044 | 2.2145245 | 4.6412857 | 62 |
| 1.7728236 | 3.4172211 | PROMOTER | | 1.7543613 | 3.3737692 | 3322 |
| 1.8222365 | 3.5362898 | PROMOTEI | 224.1715 | | | |
| 2.364198 | 5.1486636 | PROMOTER | | 1.1628002 | 2.2389157 | 3355 |
| 1.9874156 | 3.9652604 | PROMOTEI | 146.8766 | 2.0455444 | 4.1282902 | 1887 |
| 1.8572772 | 3.623232 | PROMOTEI | 139.1322 | 1.4847579 | 2.798702 | 1348 |
| 2.2479036 | 4.7499213 | PROMOTEI | 112.824 | 1.9310819 | 3.8134107 | 1381 |
| 1.8335856 | 3.564218 | PROMOTEI | 134.6672 | 1.4757122 | 2.7812091 | 4768 |
| 2.0506802 | 4.1430126 | PROMOTEI | 502.8844 | | | |
| 1.7138362 | 3.2803192 | PROMOTER | | 1.7666582 | 3.4026487 | 1255 |
| 2.1092076 | 4.3145425 | PROMOTEI | 973.6815 | 1.349945 | 2.5490241 | 4301 |
| 1.5871185 | 3.0044866 | PROMOTEI | 573.7904 | 1.3932904 | 2.6267709 | 3427 |
| 1.6931815 | 3.2336903 | PROMOTEI | 1364.311 | 1.8162929 | 3.521751 | 1643 |
| 1.6933484 | 3.2340644 | PROMOTEI | 821.299 | | | |
| 1.8662075 | 3.6457294 | PROMOTER | | 1.5164233 | 2.8608092 | 3475 |
| 1.8662133 | 3.6457441 | PROMOTEI | 1289.441 | 2.1308076 | 4.3796258 | 871 |
| 1.9995972 | 3.9988834 | PROMOTEI | 174.3207 | 2.0089192 | 4.0248059 | 1010 |
| 1.7601775 | 3.387398 | PROMOTER | | 1.2629821 | 2.399913 | 3748 |
| 1.6588395 | 3.1576242 | PROMOTEI | 257.2018 | 1.3830407 | 2.608175 | 2038 |
| 1.6466779 | 3.131118 | DIVERGENT_PROMOT | | 1.6537199 | 3.1464388 | 4372 |
| 2.516999 | 5.7239021 | PROMOTEI | 2405.241 | 2.3804166 | 5.2068708 | 184 |
| 1.7768241 | 3.42671 | PROMOTER | | 1.2729634 | 2.4165744 | 4163 |
| 1.9954367 | 3.9873678 | DIVERGENT_PROMOT | | 1.6788374 | 3.2016984 | 2538 |
| 2.2150526 | 4.6429849 | PROMOTER | | 1.9537524 | 3.8738079 | 853 |
| 1.7946037 | 3.4692016 | PROMOTEI | 349.4107 | | | |
| 2.2789392 | 4.8532097 | DIVERGENT_PROMOT | | 1.7405486 | 3.3416221 | 2245 |
| 2.1834776 | 4.5424719 | PROMOTER | | 2.4121425 | 5.3226419 | 1510 |
| 2.1927757 | 4.5718425 | PROMOTEI | 397.5721 | 2.1785831 | 4.5270872 | 2393 |
| 1.6925972 | 3.2323809 | PROMOTER | | 1.1035346 | 2.148805 | 3947 |
| 1.6144695 | 3.0619898 | PROMOTER | | 2.1669815 | 4.4908281 | 1717 |
| 1.6753076 | 3.1938744 | PROMOTEI | 126.4728 | 1.6897669 | 3.2260458 | 1339 |
| 1.9523885 | 3.8701474 | PROMOTEI | 282.6956 | 1.7227578 | 3.3006675 | 1826 |
| 1.8893882 | 3.7047808 | PROMOTEI | 121.4319 | 1.2840893 | 2.4352828 | 4856 |
| 1.8646476 | 3.6417897 | PROMOTEI | 903.0444 | | | |
| 1.9533252 | 3.872661 | PROMOTEI | 381.7869 | 1.575767 | 2.9809393 | 4260 |
| 2.0722098 | 4.2053031 | PROMOTEI | 1623.979 | | | |
| 2.002212 | 4.0061377 | PROMOTER | | 2.069407 | 4.1971412 | 573 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.8346947 | 3.5669592 | PROMOTEI | 1155.977 | 1.6430787 | 3.1233163 | 3525 |
| 1.9153591 | 3.7720769 | PROMOTEI | 230.5238 | | | |
| 1.8066249 | 3.4982294 | DIVERGENT_PROMOTER | | | | |
| 1.9618672 | 3.8956585 | PROMOTEI | 1153.536 | | | |
| 1.6259346 | 3.0864204 | PROMOTEI | 131.0363 | 1.5090947 | 2.8463138 | 3439 |
| 1.9661158 | 3.9071477 | PROMOTER | | 1.2895077 | 2.4444463 | 5476 |
| 2.5328429 | 5.7871093 | PROMOTEI | 240.7852 | 1.9641932 | 3.9019443 | 990 |
| 2.159523 | 4.4676712 | PROMOTEI | 244.6638 | 1.7657405 | 3.4004849 | 2931 |
| 2.2097218 | 4.6258606 | DIVERGENT_PROMOTER | | | | |
| 1.8087246 | 3.5033244 | PROMOTER | | 2.1072304 | 4.3086335 | 105 |
| 2.1816018 | 4.5365696 | PROMOTEI | 296.8487 | 1.8144841 | 3.5173383 | 1535 |
| 1.7063769 | 3.2634024 | PROMOTEI | 292.6122 | 1.8860403 | 3.6961935 | 3288 |
| 2.459683 | 5.5009584 | PROMOTER | | 1.4666513 | 2.7637963 | 3819 |
| 1.6346028 | 3.1050205 | PROMOTEI | 198.6927 | 1.2562083 | 2.3886712 | 2106 |
| 1.6893085 | 3.2250209 | PROMOTER | | 1.7820864 | 3.4392319 | 2451 |
| 2.0283282 | 4.0793186 | PROMOTEI | 473.8011 | 2.147522 | 4.4306612 | 1092 |
| 1.8095586 | 3.5053502 | PROMOTEI | 155.5743 | | | |
| 1.9832536 | 3.9538376 | PROMOTEI | 147.7679 | | | |
| 2.0520148 | 4.1468469 | PROMOTEI | 161.478 | 2.668877 | 6.3593398 | 421 |
| 2.2004867 | 4.5963438 | PROMOTER | | 1.6241242 | 3.0825498 | 3568 |
| 1.696161 | 3.2403755 | PROMOTER | | 1.65497 | 3.1491664 | 4922 |
| 2.0376 | 4.1056197 | PROMOTEI | 830.1649 | 2.1473873 | 4.4302475 | 1563 |
| 2.2302303 | 4.6920887 | PROMOTEI | 508.7854 | 1.6506081 | 3.1396595 | 2102 |
| 2.6251554 | 6.1695078 | PROMOTEI | 299.2472 | 1.4377156 | 2.7089159 | 1994 |
| 2.234085 | 4.7046422 | PROMOTEI | 85.93652 | 1.3664579 | 2.5783675 | 2860 |
| 1.9715165 | 3.9218015 | PROMOTEI | 202.6157 | | | |
| 1.9819453 | 3.9502537 | PROMOTER | | | | |
| 1.9033691 | 3.7408577 | PROMOTEI | 215.372 | | | |
| 1.8867843 | 3.6981002 | PROMOTEI | 183.7605 | | | |
| 1.6923842 | 3.2319037 | PROMOTER | | | | |
| 2.159452 | 4.4674513 | PROMOTEI | 126.1667 | 2.1794617 | 4.529845 | 775 |
| 1.8369114 | 3.572444 | PROMOTEI | 250.2899 | 1.7690009 | 3.4081785 | 1852 |
| 2.3271554 | 5.0181493 | PROMOTER | | | | |
| 1.9009652 | 3.7346297 | PROMOTER | | 1.4163059 | 2.6690122 | 3318 |
| 2.0987577 | 4.2834038 | PROMOTEI | 1406.942 | 2.658834 | 6.3152244 | 127 |
| 2.066494 | 4.1886751 | PROMOTEI | 169.9572 | | | |
| 2.0422258 | 4.1188049 | PROMOTEI | 1329.452 | 1.8884159 | 3.7022849 | 742 |
| 2.6220996 | 6.1564539 | PROMOTEI | 151.6563 | 1.588787 | 3.0079634 | 4441 |
| 2.1253834 | 4.3631903 | PROMOTEI | 183.3552 | 1.8150692 | 3.5187651 | 3104 |
| 1.7741486 | 3.420361 | PROMOTEI | 255.982 | 1.5236549 | 2.8751852 | 3831 |
| 1.9915844 | 3.9767349 | PROMOTER | | 1.86013 | 3.6304037 | 3618 |
| 2.74355 | 6.6971626 | PROMOTEI | 436.3669 | | | |
| 1.7066694 | 3.2640641 | DIVERGENT_PROMOT | | 1.6611211 | 3.1626219 | 4679 |
| 1.9479119 | 3.8581571 | PROMOTER | | 1.7412258 | 3.343191 | 3884 |
| 2.5290434 | 5.7718884 | PROMOTEI | 122.4724 | | | |
| 1.9277859 | 3.8047084 | PROMOTEI | 741.5244 | 1.9866807 | 3.963241 | 1999 |
| 1.9371713 | 3.8295405 | PROMOTER | | | | |
| 2.5105917 | 5.6985375 | DIVERGENT_PROMOT | | 2.1972156 | 4.585934 | 219 |
| 1.9144108 | 3.7695983 | PROMOTEI | 235.7595 | 1.4704062 | 2.770999 | 3966 |
| 1.8434541 | 3.588682 | PROMOTER | | 1.8185502 | 3.5272656 | 681 |
| 2.0324378 | 4.0909554 | PROMOTER | | 1.7411247 | 3.3429568 | 2188 |
| 2.5290692 | 5.7719916 | PROMOTEI | 372.4756 | 2.1363523 | 4.3964903 | 2020 |
| 1.6861161 | 3.2178924 | PROMOTER | | | | |
| 2.0426307 | 4.1199611 | PROMOTEI | 824.6495 | 1.3863176 | 2.6141059 | 3579 |
| 1.7834011 | 3.4423674 | PROMOTER | | 1.454549 | 2.7407087 | 3257 |
| 3.1068594 | 8.6150514 | PROMOTEI | 673.6596 | 2.802619 | 6.9770588 | 457 |
| 2.1441267 | 4.4202461 | PROMOTEI | 727.1943 | 1.4325787 | 2.6992876 | 1783 |
| 1.6145731 | 3.0622097 | PROMOTER | | 1.0745466 | 2.1060601 | 3983 |

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|---|---|---|---|---|---|---|
| 2.1609504 | 4.4720937 | PROMOTER | | 1.7599809 | 3.3869364 | 2978 |
| 1.8820052 | 3.68587 | PROMOTEI | 227.53 | | | |
| 1.9740298 | 3.9286395 | PROMOTER | | 1.4310478 | 2.6964248 | 1948 |
| 1.9201263 | 3.7845619 | DIVERGENT_PROMOT | | 1.5739073 | 2.9770992 | 2628 |
| 2.246816 | 4.7463418 | PROMOTEI | 159.168 | 1.5942249 | 3.0193226 | 4473 |
| 2.5797021 | 5.9781624 | DIVERGENT_PROMOT | | 2.136379 | 4.3965717 | 3721 |
| 1.9296546 | 3.8096398 | PROMOTER | | 1.7903457 | 3.4589777 | 3991 |
| 2.1612885 | 4.4731418 | PROMOTEI | 329.1989 | 2.0997822 | 4.2864467 | 124 |
| 2.1545193 | 4.4522028 | PROMOTER | | 2.0623739 | 4.17673 | 3240 |
| 1.9576194 | 3.8842051 | PROMOTEI | 1319.567 | 1.753801 | 3.3724592 | 1171 |
| 2.1524448 | 4.4458054 | PROMOTEI | 446.4848 | 2.587692 | 6.0113624 | 41 |
| 2.3516457 | 5.1040615 | PROMOTEI | 237.155 | | | |
| 1.6256602 | 3.0858335 | PROMOTEI | 108.6981 | 1.4212326 | 2.6781423 | 4872 |
| 2.2246227 | 4.6738865 | PROMOTEI | 1627.969 | 1.6005573 | 3.0326044 | 1521 |
| 2.1276944 | 4.3701851 | PROMOTEI | 2892.337 | | | |
| 2.484291 | 5.5955929 | PROMOTEI | 217.3064 | 1.8567536 | 3.6219173 | 1498 |
| 2.3900774 | 5.2418548 | PROMOTER | | 1.7963828 | 3.4734824 | 3184 |
| 2.14647 | 4.4274315 | PROMOTEI | 215.66 | | | |
| 1.7471836 | 3.3570257 | PROMOTEI | 885.3558 | 1.5438578 | 2.9157314 | 2583 |
| 2.2356732 | 4.7098242 | PROMOTEI | 293.4939 | 1.8524355 | 3.6110928 | 1340 |
| 1.9095887 | 3.7570198 | PROMOTEI | 569.2095 | | | |
| 2.2467196 | 4.7460247 | PROMOTEI | 1344.687 | 2.0009165 | 4.0025419 | 1811 |
| 1.9716997 | 3.9222995 | PROMOTER | | 1.5391746 | 2.9062818 | 4967 |
| 2.374233 | 5.1846011 | PROMOTEI | 338.3428 | 1.9419653 | 3.842287 | 4224 |
| 2.6642344 | 6.3389083 | PROMOTER | | 1.9149293 | 3.7709533 | 2933 |
| 2.0295622 | 4.0828093 | PROMOTEI | 102.0094 | | | |
| 1.7414169 | 3.3436339 | PROMOTEI | 515.1627 | 1.7969351 | 3.4748124 | 1876 |
| 2.3550131 | 5.1159888 | PROMOTER | | 2.106259 | 4.3057334 | 102 |
| 2.2310739 | 4.6948332 | PROMOTER | | 2.0239816 | 4.0670468 | 1912 |
| 2.202393 | 4.6024211 | PROMOTEI | 815.3384 | 1.5614644 | 2.9515329 | 3100 |
| 1.9353806 | 3.8247902 | PROMOTEI | 3140.873 | 1.7686158 | 3.4072689 | 1546 |
| 1.9076943 | 3.7520897 | PROMOTEI | 261.8723 | 1.5916864 | 3.0140146 | 322 |
| 1.8401595 | 3.5804961 | PROMOTEI | 176.6488 | | | |
| 2.6297002 | 6.1889737 | PROMOTER | | | | |
| 2.0313017 | 4.0877351 | PROMOTEI | 2299.944 | 1.9531379 | 3.8721582 | 920 |
| 2.3350382 | 5.0456432 | PROMOTER | | 1.584525 | 2.9990904 | 4917 |
| 1.7528937 | 3.370339 | DIVERGENT_PROMOT | | 1.6607072 | 3.1617147 | 2619 |
| 2.4663224 | 5.5263326 | PROMOTEI | 945.683 | 2.3583176 | 5.1277204 | 2493 |
| 2.1265917 | 4.3668461 | DIVERGENT_PROMOT | | 1.5623792 | 2.953405 | 2749 |
| 1.8247359 | 3.5424215 | PROMOTEI | 1012.562 | | | |
| 1.9902271 | 3.9729953 | PROMOTER | | 2.1197028 | 4.3460441 | 166 |
| 2.0188153 | 4.0525087 | PROMOTEI | 133.8223 | 2.2863092 | 4.8780657 | 3992 |
| 2.1728683 | 4.50919 | PROMOTEI | 992.829 | 1.7592677 | 3.3852625 | 5317 |
| 1.8527042 | 3.6117654 | PROMOTEI | 131.4608 | | | |
| 1.8605266 | 3.6314019 | PROMOTER | | | | |
| 2.3259397 | 5.0139225 | PROMOTEI | 121.159 | | | |
| 1.6981227 | 3.2447846 | PROMOTER | | 1.3647819 | 2.5753739 | 1161 |
| 1.6264378 | 3.0874971 | PROMOTEI | 123.7646 | 1.1063846 | 2.1530541 | 3846 |
| 1.6924127 | 3.2319675 | PROMOTEI | 235.3421 | 1.7329154 | 3.3239885 | 1271 |
| 1.97925 | 3.9428805 | PROMOTER | | 1.3262869 | 2.5075647 | 1569 |
| 2.554074 | 5.8729038 | PROMOTEI | 169.0576 | 1.3658274 | 2.5772409 | 5044 |
| 1.8805606 | 3.6821811 | PROMOTEI | 90.83684 | | | |
| 2.1762552 | 4.5197883 | PROMOTEI | 707.448 | 1.994422 | 3.9845644 | 2205 |
| 1.8676131 | 3.6492832 | PROMOTEI | 254.1987 | | | |
| 2.0777674 | 4.2215342 | DIVERGENT_PROMOT | | 1.707846 | 3.2667272 | 1429 |
| 2.3844626 | 5.2214938 | PROMOTER | | 2.2039719 | 4.6074608 | 1986 |
| 1.6010882 | 3.0337206 | PROMOTER | | 1.478127 | 2.7858682 | 1581 |
| 1.8090833 | 3.5041956 | PROMOTEI | 113.916 | | | |

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|---|---|---|---|---|---|---|
| 2.0179985 | 4.050215 | PROMOTEI | 603.8729 | 1.6062952 | 3.0446897 | 1977 |
| 1.9843442 | 3.9568276 | PROMOTEI | 507.5022 | 1.8813133 | 3.6841028 | 513 |
| 1.948881 | 3.8607496 | DIVERGENT_PROMOT | | 1.7260405 | 3.3081863 | 868 |
| 1.7203208 | 3.2950967 | PROMOTER | | 1.2436602 | 2.3679854 | 1839 |
| 1.661946 | 3.1644308 | PROMOTEI | 735.6082 | 1.6774876 | 3.1987042 | 4104 |
| 2.3173037 | 4.9839987 | PROMOTEI | 301.767 | 1.5832874 | 2.9965187 | 2392 |
| 1.9504219 | 3.8648754 | DIVERGENT_PROMOT | | 1.2245369 | 2.3368043 | 4947 |
| 2.5420997 | 5.8243607 | PROMOTEI | 238.3685 | 1.5776474 | 2.9848272 | 3405 |
| 1.8913155 | 3.7097334 | PROMOTER | | 1.9608675 | 3.8929599 | 887 |
| 2.0250795 | 4.070143 | PROMOTEI | 172.5571 | | | |
| 2.2221096 | 4.6657519 | PROMOTEI | 273.0686 | 1.4596252 | 2.750369 | 5323 |
| 2.3821635 | 5.2131794 | PROMOTEI | 191.4248 | 1.6445078 | 3.1264118 | 3062 |
| 2.1668162 | 4.4903136 | PROMOTEI | 102.0313 | 1.8658452 | 3.644814 | 453 |
| 1.6966586 | 3.2414933 | PROMOTER | | 1.6967099 | 3.2416086 | 2973 |
| 2.203592 | 4.6062477 | PROMOTER | | | | |
| 1.8061925 | 3.4971811 | PROMOTEI | 426.6448 | | | |
| 2.4016335 | 5.2840111 | PROMOTEI | 3002 | 1.6213171 | 3.0765578 | 4869 |
| 2.0529122 | 4.1494272 | DIVERGENT_PROMOT | | 1.640919 | 3.1186443 | 2781 |
| 2.3843544 | 5.2211022 | PROMOTEI | 108.0507 | 1.8701682 | 3.655752 | 3572 |
| 2.3943813 | 5.2575159 | PROMOTEI | 2050.742 | 1.7449927 | 3.3519316 | 952 |
| 2.020128 | 4.0561978 | PROMOTEI | 128.856 | 1.7666551 | 3.4026414 | 571 |
| 2.1488013 | 4.4345918 | PROMOTEI | 586.8477 | 2.4254494 | 5.3719631 | 81 |
| 2.2599669 | 4.7898049 | PROMOTER | | 1.7503979 | 3.3645135 | 1784 |
| 2.250661 | 4.7590084 | PROMOTEI | 520.4139 | 1.6118815 | 3.056502 | 2823 |
| 2.368738 | 5.1648913 | PROMOTER | | | | |
| 2.2452047 | 4.7410437 | PROMOTER | | 1.5587746 | 2.9460351 | 3923 |
| 1.8761714 | 3.6709956 | PROMOTEI | 114.7014 | 1.6620393 | 3.1646354 | 3938 |
| 1.9015461 | 3.7361337 | PROMOTER | | 1.6829598 | 3.2108601 | 1630 |
| 1.8900219 | 3.7064085 | PROMOTER | | 1.4733521 | 2.776663 | 1842 |
| 2.255592 | 4.7753021 | PROMOTER | | | | |
| 1.8984083 | 3.7280166 | PROMOTEI | 155.2332 | 1.7517003 | 3.3675522 | 4699 |
| 2.2507193 | 4.7592007 | PROMOTER | | 1.5480273 | 2.9241702 | 2684 |
| 2.341441 | 5.068086 | PROMOTEI | 104.8606 | 1.4116964 | 2.6604981 | 4438 |
| 2.366365 | 5.1564029 | PROMOTEI | 251.1839 | | | |
| 2.3246744 | 5.009527 | DIVERGENT_PROMOT | | 2.0009754 | 4.0027053 | 1055 |
| 1.6842387 | 3.2137077 | PROMOTEI | 948.2019 | 1.5087868 | 2.8457064 | 5528 |
| 2.3882606 | 5.2352579 | PROMOTEI | 225.548 | 1.2805558 | 2.4293255 | 4102 |
| 2.269922 | 4.8229705 | PROMOTER | | 1.4574406 | 2.7462074 | 4750 |
| 1.598391 | 3.0280541 | PROMOTEI | 5138.132 | 1.8870347 | 3.6987421 | 2639 |
| 1.7244927 | 3.304639 | PROMOTEI | 175.5248 | | | |
| 1.8585728 | 3.6264873 | PROMOTEI | 204.3389 | | | |
| 1.6311805 | 3.0976636 | PROMOTEI | 117.6825 | 1.2125837 | 2.3175231 | 3943 |
| 1.9440002 | 3.8477104 | PROMOTEI | 1420.568 | 1.6641098 | 3.1691804 | 1468 |
| 2.9095755 | 7.5139708 | DIVERGENT_PROMOT | | 1.5715717 | 2.9722834 | 4839 |
| 2.0880349 | 4.2516855 | PROMOTEI | 319.0362 | 1.7124718 | 3.2772184 | 1895 |
| 1.616044 | 3.0653334 | PROMOTEI | 491.1275 | 1.1737986 | 2.2560493 | 2620 |
| 2.107067 | 4.3081456 | PROMOTER | | | | |
| 2.0830107 | 4.2369048 | PROMOTEI | 256.3558 | 1.7184142 | 3.2907449 | 5173 |
| 1.9763466 | 3.9349535 | PROMOTER | | | | |
| 2.105134 | 4.3023772 | PROMOTER | | 2.2693963 | 4.8212134 | 193 |
| 2.3850403 | 5.2235851 | PROMOTEI | 300.1681 | 2.5076625 | 5.6869791 | 961 |
| 1.915479 | 3.7723904 | PROMOTEI | 230.4821 | 1.5090321 | 2.8461902 | 3856 |
| 1.8816 | 3.6848349 | PROMOTER | | 1.9920062 | 3.9778978 | 1053 |
| 1.6352669 | 3.1064501 | PROMOTER | | | | |
| 1.991926 | 3.9776766 | DIVERGENT_PROMOT | | 1.6526403 | 3.1440852 | 2000 |
| 2.3609102 | 5.1369435 | PROMOTEI | 155.6606 | | | |
| 1.8842394 | 3.6915825 | PROMOTEI | 11059.15 | 1.6226872 | 3.0794809 | 298 |
| 2.2698343 | 4.8226774 | PROMOTEI | 390.2161 | 1.2092042 | 2.3121006 | 3817 |

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|---|---|---|---|---|---|---|
| 1.9523647 | 3.8700835 | DIVERGENT_PROMOTER | | | | |
| 1.6365974 | 3.1093163 | PROMOTEI | 773.694 | 1.7149519 | 3.282857 | 2110 |
| 2.3460445 | 5.0842836 | PROMOTEI | 334.4414 | 1.8046256 | 3.4933849 | 2238 |
| 2.0057878 | 4.0160794 | DIVERGENT_PROMOT | | 1.5866668 | 3.0035461 | 4239 |
| 2.449828 | 5.4635096 | PROMOTEI | 142.4904 | | | |
| 2.2362273 | 4.7116334 | PROMOTEI | 148.12 | 2.0577598 | 4.1633932 | 336 |
| 2.0926874 | 4.2654188 | PROMOTER | | | | |
| 2.0923197 | 4.2643318 | PROMOTEI | 315.1288 | | | |
| 1.8898114 | 3.7058678 | PROMOTER | | | | |
| 2.1072507 | 4.3086942 | PROMOTER | | | | |
| 2.1232407 | 4.3567149 | DIVERGENT_PROMOTER | | | | |
| 1.7846547 | 3.4453599 | PROMOTEI | 903.5555 | 1.6661981 | 3.1737711 | 3690 |
| 2.2232509 | 4.6694444 | PROMOTEI | 5500.217 | 1.8949677 | 3.7191365 | 337 |
| 2.2511299 | 4.7605554 | PROMOTEI | 359.263 | 2.197878 | 4.5880401 | 1219 |
| 2.6193585 | 6.1447678 | DIVERGENT_PROMOT | | 2.0338562 | 4.0949794 | 2699 |
| 1.6274092 | 3.0895767 | PROMOTEI | 2349.954 | 2.5084848 | 5.6902215 | 20 |
| 2.0748413 | 4.2129807 | PROMOTER | | 1.7602023 | 3.3874562 | 523 |
| 1.7959464 | 3.4724319 | DIVERGENT_PROMOT | | 2.253515 | 4.7684322 | 224 |
| 2.0263433 | 4.0737101 | PROMOTEI | 274.9883 | 1.2882648 | 2.4423413 | 1631 |
| 2.4201488 | 5.3522622 | PROMOTEI | 2876.913 | 1.5806721 | 2.9910916 | 2730 |
| 2.0703156 | 4.1997854 | PROMOTEI | 160.0947 | 1.478147 | 2.7859068 | 3504 |
| 1.8294259 | 3.5539562 | PROMOTEI | 104.6969 | 1.234166 | 2.3524532 | 1221 |
| 2.6989658 | 6.4933627 | PROMOTER | | | | |
| 1.654483 | 3.1481036 | PROMOTEI | 143.3709 | | | |
| 1.9844208 | 3.9570377 | PROMOTEI | 4687.351 | 1.8429868 | 3.5875198 | 848 |
| 2.2276218 | 4.6836128 | PROMOTER | | 1.873399 | 3.6639479 | 3462 |
| 2.2768655 | 4.8462388 | PROMOTEI | 382.6017 | 2.5578506 | 5.8882976 | 791 |
| 1.9150994 | 3.771398 | PROMOTER | | 1.4257826 | 2.686602 | 5304 |
| 1.618498 | 3.0705519 | PROMOTEI | 140.4408 | 1.1314061 | 2.1907215 | 5162 |
| 2.6454728 | 6.2570074 | PROMOTEI | 874.1541 | 1.2045792 | 2.3047004 | 3212 |
| 2.0448396 | 4.1262739 | PROMOTEI | 211.8183 | 1.4819819 | 2.793322 | 1921 |
| 2.8465817 | 7.1929406 | DIVERGENT_PROMOT | | 2.3652143 | 5.1522918 | 2362 |
| 1.737555 | 3.3346954 | PROMOTEI | 333.4046 | | | |
| 2.1047447 | 4.3012163 | PROMOTER | | | | |
| 2.3180404 | 4.9865444 | PROMOTEI | 152.4081 | 1.8132291 | 3.5142799 | 4476 |
| 1.6790106 | 3.2020828 | PROMOTEI | 2615.832 | | | |
| 2.1573458 | 4.460934 | PROMOTER | | 1.6861004 | 3.2178574 | 1914 |
| 2.6046665 | 6.0825088 | PROMOTER | | 2.401979 | 5.2852767 | 1780 |
| 2.0432212 | 4.1216477 | PROMOTEI | 211.0051 | 1.8507367 | 3.6068432 | 2438 |
| 1.7154261 | 3.2839362 | PROMOTER | | 1.4162737 | 2.6689526 | 3590 |
| 1.8006247 | 3.4837104 | PROMOTEI | 4289.878 | 1.2757406 | 2.4212308 | 2469 |
| 2.3747509 | 5.1864626 | PROMOTER | | 1.9605913 | 3.8922147 | 582 |
| 1.8736655 | 3.6646248 | PROMOTEI | 162.4404 | 1.6008055 | 3.0331261 | 4295 |
| 2.0740361 | 4.21063 | PROMOTEI | 127.4913 | | | |
| 1.8313406 | 3.558676 | PROMOTEI | 561.7726 | | | |
| 1.8759924 | 3.6705402 | PROMOTEI | 1341.191 | 1.9535877 | 3.8733657 | 1993 |
| 2.0247066 | 4.0690912 | PROMOTER | | 2.0784216 | 4.2234489 | 3170 |
| 2.4406736 | 5.4289515 | PROMOTEI | 534.6191 | 1.9546181 | 3.8761331 | 1080 |
| 2.285511 | 4.8753676 | PROMOTEI | 430.3247 | 1.6310128 | 3.0973036 | 4062 |
| 2.175024 | 4.5159327 | PROMOTEI | 324.4171 | 2.6100588 | 6.1052857 | 46 |
| 2.614758 | 6.1252045 | PROMOTER | | | | |
| 1.7534467 | 3.3716311 | PROMOTER | | | | |
| 1.9931484 | 3.9810484 | PROMOTEI | 267.0079 | 1.6279875 | 3.0908154 | 2599 |
| 2.5622618 | 5.9063293 | PROMOTEI | 1517.006 | | | |
| 2.4341805 | 5.4045725 | PROMOTER | | | | |
| 1.8442793 | 3.5907353 | PROMOTER | | 1.4887353 | 2.8064285 | 4502 |
| 2.5897927 | 6.0201219 | PROMOTEI | 543.7068 | 1.6991262 | 3.2470423 | 1698 |
| 1.8469871 | 3.5974811 | PROMOTER | | 1.1596001 | 2.233955 | 2932 |

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|---|---|---|---|---|---|---|
| 1.6121879 | 3.0571512 | PROMOTER | | 1.4354599 | 2.7046837 | 5255 |
| 1.6963243 | 3.2407423 | PROMOTEI | 491.8988 | 1.5637883 | 2.956291 | 1130 |
| 2.1719127 | 4.5062042 | PROMOTEI | 91.21246 | 2.326105 | 5.014497 | 703 |
| 2.1244094 | 4.3602456 | PROMOTER | | 1.6568844 | 3.153348 | 2049 |
| 1.9808729 | 3.9473184 | DIVERGENT_PROMOT | | 2.0009027 | 4.0025036 | 2829 |
| 2.5946105 | 6.0402594 | PROMOTER | | | | |
| 1.6408663 | 3.1185304 | PROMOTER | | 1.5833479 | 2.9966444 | 5443 |
| 1.7442688 | 3.3502501 | PROMOTEI | 311.9728 | 1.3409815 | 2.533236 | 4968 |
| 2.2939014 | 4.9038043 | PROMOTEI | 1347.569 | 1.9289087 | 3.8076707 | 2114 |
| 1.7974918 | 3.4761535 | PROMOTEI | 124.068 | 1.4621671 | 2.7552192 | 5478 |
| 1.9088042 | 3.7549773 | PROMOTER | | 1.6163718 | 3.06603 | 1228 |
| 1.9018241 | 3.7368537 | PROMOTEI | 191.634 | | | |
| 1.8757145 | 3.6698332 | DIVERGENT_PROMOTER | | | | |
| 2.3466172 | 5.0863023 | PROMOTER | | | | |
| 2.0452611 | 4.1274796 | PROMOTEI | 571.7365 | 1.5872806 | 3.0048242 | 4589 |
| 1.6205354 | 3.0748913 | PROMOTEI | 262.7106 | 1.6761239 | 3.1956821 | 4724 |
| 1.7199357 | 3.2942172 | PROMOTEI | 160.0667 | 1.4731843 | 2.7763401 | 5126 |
| 1.6748679 | 3.1929012 | PROMOTER | | 1.6256922 | 3.0859019 | 1567 |
| 2.7803595 | 6.8702352 | PROMOTER | | 2.0882504 | 4.2523207 | 1266 |
| 1.770016 | 3.4105774 | DIVERGENT_PROMOT | | 1.407927 | 2.653556 | 3276 |
| 2.502594 | 5.6670346 | DIVERGENT_PROMOTER | | | | |
| 2.0723345 | 4.2056666 | PROMOTEI | 10840.51 | 2.436898 | 5.4147623 | 980 |
| 2.1791427 | 4.5288435 | PROMOTER | | 1.7007043 | 3.2505961 | 4816 |
| 1.7892116 | 3.4562596 | PROMOTER | | 1.4540884 | 2.7398338 | 2943 |
| 1.700192 | 3.249442 | PROMOTEI | 827.512 | 1.3350618 | 2.5228629 | 4851 |
| 1.6577471 | 3.1552342 | PROMOTEI | 487.2851 | 1.6643528 | 3.1697143 | 5425 |
| 1.620888 | 3.0756429 | PROMOTEI | 118.4153 | | | |
| 2.1310809 | 4.3804555 | PROMOTEI | 146.1612 | | | |
| 2.1234264 | 4.3572757 | PROMOTEI | 927.7042 | 1.7094216 | 3.2702969 | 3127 |
| 1.7798026 | 3.4337919 | PROMOTEI | 1387.803 | 1.6200659 | 3.0738908 | 2972 |
| 1.9771659 | 3.9371888 | DIVERGENT_PROMOT | | 2.4551003 | 5.4835124 | 1306 |
| 2.35863 | 5.1288309 | PROMOTEI | 216.5453 | 1.189887 | 2.2813487 | 3410 |
| 1.7108849 | 3.2736155 | PROMOTEI | 679.2217 | 1.8575063 | 3.6238074 | 2133 |
| 2.073423 | 4.208841 | PROMOTEI | 190.7843 | 1.6172227 | 3.0678388 | 4595 |
| 1.7826315 | 3.4405316 | PROMOTEI | 1284.333 | | | |
| 1.8669184 | 3.6475263 | PROMOTEI | 825.2341 | 1.2763332 | 2.4222255 | 2142 |
| 2.4245586 | 5.3686472 | PROMOTEI | 326.3202 | 1.4564536 | 2.7443293 | 4517 |
| 2.0108254 | 4.0301273 | DIVERGENT_PROMOT | | 1.5232797 | 2.8744376 | 3131 |
| 1.6723207 | 3.1872688 | PROMOTER | | 1.4390111 | 2.7113495 | 2805 |
| 1.7876111 | 3.4524275 | PROMOTER | | 1.4175853 | 2.6713802 | 1547 |
| 1.9401302 | 3.8374028 | DIVERGENT_PROMOT | | 1.5710739 | 2.971258 | 2394 |
| 2.2052767 | 4.6116298 | PROMOTEI | 494.8671 | 1.0555851 | 2.078561 | 4079 |
| 2.032557 | 4.0912934 | PROMOTER | | 1.007322 | 2.0101762 | 5041 |
| 1.6825308 | 3.2099054 | PROMOTEI | 171.1766 | | | |
| 1.7993331 | 3.4805929 | PROMOTEI | 1108.615 | 1.4238554 | 2.6830155 | 1108 |
| 1.8761005 | 3.6708152 | PROMOTEI | 90.75128 | 1.2176023 | 2.3255989 | 5056 |
| 1.9027421 | 3.7392323 | PROMOTEI | 1507.211 | 1.685589 | 3.216717 | 1398 |
| 1.6895131 | 3.2254783 | PROMOTEI | 569.0947 | 1.7945596 | 3.4690956 | 2771 |
| 2.0447674 | 4.1260674 | PROMOTEI | 709.5767 | 1.5591323 | 2.9467656 | 2280 |
| 2.2325258 | 4.6995604 | PROMOTEI | 197.554 | | | |
| 1.7768605 | 3.4267965 | PROMOTEI | 366.9747 | 1.4624698 | 2.7557973 | 724 |
| 2.2568069 | 4.7793251 | PROMOTEI | 933.8489 | 2.681059 | 6.4132649 | 1009 |
| 2.3638122 | 5.1472869 | PROMOTER | | 2.1367385 | 4.3976674 | 3403 |
| 2.177764 | 4.5245177 | PROMOTEI | 392.7815 | 1.9243891 | 3.7957609 | 1242 |
| 2.3057003 | 4.9440739 | PROMOTER | | | | |
| 1.8768957 | 3.6728391 | PROMOTEI | 121.2442 | 1.4549342 | 2.7414406 | 1867 |
| 2.2397168 | 4.7230434 | PROMOTEI | 92.41115 | | | |
| 2.3741517 | 5.184309 | PROMOTER | | 1.4610412 | 2.7530698 | 4833 |

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|---|---|---|---|---|---|---|
| 1.8613579 | 3.6334949 | PROMOTEI | 835.831 | 1.6505549 | 3.1395437 | 3195 |
| 1.9029106 | 3.739669 | PROMOTEI | 678.9102 | 1.4364188 | 2.706482 | 5596 |
| 2.244021 | 4.7371554 | PROMOTEI | 521.4952 | 1.5216895 | 2.871271 | 1284 |
| 1.8719044 | 3.6601541 | PROMOTEI | 1505.778 | 1.495992 | 2.8205803 | 1555 |
| 1.9240392 | 3.7948404 | PROMOTEI | 726.8564 | 2.1361506 | 4.3958757 | 2014 |
| 2.0784996 | 4.2236773 | PROMOTEI | 1923.643 | 1.9688203 | 3.914479 | 333 |
| 2.0448844 | 4.1264021 | PROMOTEI | 116.9683 | 1.5845858 | 2.9992168 | 2372 |
| 2.035492 | 4.0996251 | PROMOTEI | 1180.973 | 1.7629019 | 3.3938008 | 2092 |
| 1.6187917 | 3.0711771 | PROMOTER | | 1.5117412 | 2.8515399 | 5327 |
| 2.4378514 | 5.4183418 | PROMOTEI | 189.4646 | 1.7928385 | 3.4649595 | 2729 |
| 2.2066534 | 4.6160326 | PROMOTEI | 1412.509 | 1.8747696 | 3.6674304 | 1885 |
| 1.6861591 | 3.2179883 | PROMOTEI | 215.0427 | 1.8012997 | 3.4853407 | 4830 |
| 2.2989182 | 4.9208864 | PROMOTEI | 189.6788 | 0.8361942 | 1.7853342 | 2481 |
| 1.6630386 | 3.1668282 | PROMOTER | | 1.3068709 | 2.4740436 | 3014 |
| 2.0442665 | 4.1246351 | PROMOTEI | 399.8205 | 2.5171463 | 5.7244866 | 441 |
| 1.6785431 | 3.2010453 | PROMOTEI | 1750.791 | 1.8843263 | 3.6918049 | 519 |
| 1.6102546 | 3.0530572 | PROMOTEI | 3874.771 | 2.9102268 | 7.5173637 | 27 |
| 1.6508838 | 3.1402595 | PROMOTEI | 170.1208 | 2.14095 | 4.4105238 | 746 |
| 2.1802728 | 4.5323925 | PROMOTEI | 108.1187 | | | |
| 2.039134 | 4.1099875 | PROMOTEI | 126.1331 | 1.8223307 | 3.5365207 | 3682 |
| 1.8620386 | 3.6352097 | PROMOTEI | 2050.776 | | | |
| 2.1759949 | 4.5189729 | PROMOTEI | 214.4864 | 1.6540782 | 3.1472204 | 2154 |
| 1.9253448 | 3.7982762 | PROMOTEI | 2353.397 | 1.6431944 | 3.1235668 | 3470 |
| 2.73259 | 6.6464778 | PROMOTEI | 155.8575 | 1.4366653 | 2.7069445 | 3348 |
| 1.7781328 | 3.4298198 | DIVERGENT_PROMOTER | | | | |
| 2.3343437 | 5.0432149 | PROMOTER | | | | |
| 2.1966527 | 4.5841451 | PROMOTER | | 1.442429 | 2.7177806 | 5243 |
| 2.153877 | 4.4502211 | PROMOTEI | 165.4903 | | | |
| 1.8146172 | 3.5176628 | PROMOTEI | 197.8681 | | | |
| 2.1615567 | 4.4739735 | PROMOTEI | 150.9281 | 1.2366323 | 2.3564781 | 5072 |
| 2.0640075 | 4.1814621 | PROMOTEI | 1917.03 | 2.010142 | 4.0282187 | 206 |
| 1.7094 | 3.2702479 | PROMOTER | | | | |
| 2.0840807 | 4.2400483 | PROMOTEI | 179.5975 | 1.626185 | 3.0869562 | 2698 |
| 2.173839 | 4.512225 | PROMOTEI | 312.4597 | 1.7574415 | 3.38098 | 1382 |
| 2.1971734 | 4.5857999 | PROMOTEI | 148.8131 | | | |
| 2.3134627 | 4.9707471 | PROMOTER | | 1.8674449 | 3.6488577 | 4193 |
| 1.9106493 | 3.7597827 | PROMOTER | | 1.5829089 | 2.9957327 | 1614 |
| 1.703789 | 3.2575538 | PROMOTEI | 1088.114 | | | |
| 2.036094 | 4.1013362 | PROMOTEI | 1952.828 | 1.994752 | 3.9854759 | 1052 |
| 1.7553864 | 3.3761673 | PROMOTEI | 160.1275 | 1.8278623 | 3.5501065 | 199 |
| 2.4542978 | 5.4804631 | PROMOTEI | 708.5726 | 1.4278352 | 2.6904271 | 2777 |
| 2.1292214 | 4.3748131 | PROMOTER | | | | |
| 1.8896109 | 3.7053528 | PROMOTER | | | | |
| 2.1126685 | 4.3249052 | PROMOTEI | 406.0888 | 1.3301494 | 2.5142871 | 3356 |
| 2.3062468 | 4.9459471 | DIVERGENT_PROMOT | | 2.5806808 | 5.9822193 | 3190 |
| 1.8217567 | 3.5351139 | PROMOTER | | 1.1878325 | 2.2781022 | 2415 |
| 2.0985653 | 4.2828326 | PROMOTEI | 1231.274 | 1.5612421 | 2.9510781 | 2240 |
| 1.9620334 | 3.8961073 | PROMOTEI | 172.9685 | 1.4685535 | 2.7674428 | 3546 |
| 2.2376318 | 4.7162226 | PROMOTEI | 321.2929 | 1.5331912 | 2.8942533 | 708 |
| 2.2180889 | 4.6527669 | PROMOTER | | 2.1647854 | 4.4839973 | 1489 |
| 1.8847386 | 3.6928601 | PROMOTEI | 127.8018 | | | |
| 2.2084157 | 4.6216746 | PROMOTEI | 139.0073 | 1.1906906 | 2.2826198 | 4893 |
| 1.9494568 | 3.8622908 | PROMOTEI | 160.3219 | 1.9333773 | 3.8194828 | 4002 |
| 1.6417043 | 3.1203423 | DIVERGENT_PROMOT | | 1.6007779 | 3.0330681 | 3713 |
| 1.6537027 | 3.1464013 | PROMOTEI | 190.2984 | 1.5203413 | 2.868589 | 3419 |
| 2.7361593 | 6.6629418 | PROMOTEI | 128.422 | | | |
| 1.9062004 | 3.7482064 | PROMOTEI | 418.8985 | 2.1077383 | 4.3101507 | 2316 |
| 1.7219119 | 3.2987327 | PROMOTEI | 334.5595 | | | |

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|---|---|---|---|---|---|---|
| 2.115449 | 4.3332486 | PROMOTEI | 1051.863 | | | |
| 1.7908196 | 3.4601141 | PROMOTEI | 250.3751 | | | |
| 1.9865197 | 3.9627987 | PROMOTEI | 184.6241 | | | |
| 2.079269 | 4.2259304 | DIVERGENT_PROMOT | | 1.8545607 | 3.6164161 | 2182 |
| 1.9877721 | 3.9662403 | PROMOTEI | 537.1799 | 1.2045277 | 2.3046181 | 5362 |
| 1.6990345 | 3.246836 | DIVERGENT_PROMOT | | 1.5468503 | 2.9217856 | 1001 |
| 1.8914504 | 3.7100803 | PROMOTER | | | | |
| 1.9213542 | 3.7877844 | PROMOTER | | | | |
| 1.9183675 | 3.7799509 | PROMOTER | | 1.5128909 | 2.8538132 | 4677 |
| 1.74427 | 3.3502529 | PROMOTER | | 1.0396289 | 2.0556988 | 4747 |
| 1.6338137 | 3.1033226 | PROMOTER | | 1.415025 | 2.6666436 | 2532 |
| 1.9487624 | 3.8604323 | PROMOTER | | 0.651727 | 1.5710477 | 3931 |
| 2.0758195 | 4.2158382 | PROMOTEI | 848.1772 | | | |
| 2.4260833 | 5.374324 | PROMOTEI | 132.0055 | | | |
| 2.526172 | 5.760412 | PROMOTEI | 586.8383 | | | |
| 2.1546216 | 4.4525185 | PROMOTEI | 185.4543 | 1.4726158 | 2.7752463 | 1729 |
| 1.6544578 | 3.1480486 | PROMOTER | | 1.5375051 | 2.9029206 | 4813 |
| 1.6030166 | 3.0377783 | PROMOTEI | 641.5778 | 1.8298469 | 3.5549934 | 4285 |
| 2.1889327 | 4.5596804 | PROMOTEI | 2086.941 | 1.6903273 | 3.2272991 | 5411 |
| 2.1262496 | 4.3658108 | PROMOTEI | 205.9845 | 2.054272 | 4.1533401 | 1975 |
| 1.7926581 | 3.4645263 | PROMOTER | | 1.9694697 | 3.9162414 | 1954 |
| 2.1829934 | 4.5409476 | PROMOTER | | 1.409211 | 2.6559187 | 5403 |
| 2.3482912 | 5.0922075 | PROMOTEI | 287.8134 | 1.724012 | 3.3035381 | 2812 |
| 1.9542717 | 3.8752025 | PROMOTEI | 184.6692 | 1.7696695 | 3.4097584 | 1355 |
| 2.0267694 | 4.0749134 | PROMOTER | | 1.5873297 | 3.0049265 | 3341 |
| 1.9311526 | 3.8135975 | PROMOTEI | 877.5399 | 1.7627076 | 3.3933438 | 862 |
| 2.1104107 | 4.318142 | DIVERGENT_PROMOT | | 1.6325926 | 3.1006971 | 822 |
| 1.770337 | 3.4113363 | PROMOTEI | 185.5578 | | | |
| 2.4698498 | 5.5398611 | PROMOTEI | 291.0928 | 2.275696 | 4.8423119 | 3737 |
| 2.409107 | 5.3114546 | PROMOTEI | 455.2292 | 2.7602072 | 6.7749354 | 2002 |
| 1.8581426 | 3.6254061 | PROMOTEI | 121.2498 | 1.4457483 | 2.7240408 | 2424 |
| 2.0582485 | 4.1648037 | PROMOTER | | | | |
| 1.7720809 | 3.4154624 | DIVERGENT_PROMOT | | 2.2994206 | 4.9226003 | 432 |
| 2.2675579 | 4.8150738 | PROMOTEI | 260.51 | 1.5132871 | 2.854597 | 2220 |
| 1.8053901 | 3.4952366 | PROMOTER | | 1.6438197 | 3.124921 | 730 |
| 1.6264905 | 3.0876099 | PROMOTEI | 110.3474 | | | |
| 1.8079753 | 3.5015054 | PROMOTEI | 462.3689 | 1.6601528 | 3.1605 | 2155 |
| 1.7662733 | 3.401741 | PROMOTER | | 1.3261954 | 2.5074056 | 3319 |
| 2.7696004 | 6.8191901 | PROMOTEI | 399.862 | 1.9633394 | 3.8996358 | 3691 |
| 1.61943 | 3.0725362 | PROMOTEI | 259.0963 | 1.1474885 | 2.2152791 | 4388 |
| 1.9692171 | 3.9155558 | PROMOTER | | 1.2733765 | 2.4172664 | 1815 |
| 1.7505423 | 3.3648502 | PROMOTEI | 152.5419 | 1.7026792 | 3.2550489 | 4450 |
| 1.9155704 | 3.7726294 | PROMOTER | | | | |
| 1.8215252 | 3.5345467 | PROMOTER | | 2.0322814 | 4.0905119 | 1602 |
| 1.9904017 | 3.9734762 | PROMOTEI | 104.9005 | 1.6940008 | 3.2355272 | 2153 |
| 1.8747835 | 3.6674658 | DIVERGENT_PROMOT | | 1.8721662 | 3.6608184 | 2900 |
| 1.6327347 | 3.1010025 | PROMOTEI | 414.5686 | 1.3750913 | 2.5938433 | 4558 |
| 2.105434 | 4.3032719 | DIVERGENT_PROMOT | | 1.7350596 | 3.3289325 | 1564 |
| 1.6419986 | 3.1209789 | PROMOTER | | 1.2880377 | 2.4419568 | 906 |
| 2.4474761 | 5.4546102 | PROMOTEI | 856.8184 | 1.3389516 | 2.5296742 | 5325 |
| 2.2293649 | 4.689275 | DIVERGENT_PROMOT | | 1.4797039 | 2.7889149 | 3392 |
| 2.3054624 | 4.9432587 | PROMOTEI | 157.0523 | 2.027382 | 4.0766441 | 1331 |
| 1.8747174 | 3.6672977 | PROMOTEI | 356.0156 | | | |
| 1.7553743 | 3.376139 | PROMOTEI | 134.2955 | | | |
| 1.6398157 | 3.1162602 | PROMOTEI | 493.8743 | | | |
| 2.0503552 | 4.1420794 | DIVERGENT_PROMOT | | 1.5015256 | 2.8314197 | 4013 |
| 2.1442373 | 4.420585 | DIVERGENT_PROMOT | | 1.7886865 | 3.4550019 | 1455 |
| 2.0521698 | 4.1472925 | PROMOTER | | 1.4463884 | 2.7252497 | 1150 |

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|---|---|---|---|---|---|---|
| 1.8451988 | 3.5930246 | PROMOTEI | 1364.937 | 1.98738 | 3.9651625 | 1071 |
| 1.8125255 | 3.5125664 | PROMOTEI | 761.3904 | 1.9838799 | 3.9555544 | 1119 |
| 2.086676 | 4.2476827 | PROMOTEI | 747.2343 | 1.9495628 | 3.8625746 | 3810 |
| 2.3367834 | 5.0517505 | PROMOTEI | 142.2955 | 1.7547655 | 3.3747146 | 5230 |
| 1.685681 | 3.2169221 | PROMOTEI | 187.4915 | 1.4042059 | 2.6467206 | 3686 |
| 1.9305847 | 3.8120967 | PROMOTEI | 181.5549 | 1.4306551 | 2.6956909 | 3261 |
| 2.0544627 | 4.1538891 | PROMOTEI | 497.157 | 1.9518002 | 3.8685695 | 616 |
| 2.0322058 | 4.0902976 | PROMOTEI | 146.3199 | 1.7425661 | 3.3462984 | 4231 |
| 1.632563 | 3.1006335 | PROMOTEI | 96.83876 | 1.7143557 | 3.2815006 | 1117 |
| 2.3176203 | 4.9850926 | PROMOTER | | | | |
| 2.0126534 | 4.035237 | PROMOTEI | 414.0583 | 1.7810779 | 3.4368286 | 431 |
| 1.8844901 | 3.692224 | PROMOTEI | 366.1335 | | | |
| 1.9494945 | 3.8623918 | DIVERGENT_PROMOTER | | | | |
| 1.7966301 | 3.4740779 | PROMOTER | | 1.5766195 | 2.9827013 | 2127 |
| 1.860785 | 3.6320524 | PROMOTEI | 1325.502 | 1.530992 | 2.8898448 | 2037 |
| 1.8447729 | 3.591964 | PROMOTEI | 1976.496 | 1.2403862 | 2.3626177 | 3707 |
| 1.6180902 | 3.0696841 | PROMOTER | | | | |
| 1.904358 | 3.7434228 | PROMOTEI | 1298.845 | | | |
| 2.1010623 | 4.2902517 | PROMOTEI | 472.6971 | 1.5411595 | 2.9102831 | 1102 |
| 1.93183 | 3.8153886 | PROMOTER | | 2.0527472 | 4.1489527 | 4455 |
| 1.7458705 | 3.3539717 | PROMOTEI | 501.6178 | | | |
| 2.3662827 | 5.1561088 | PROMOTEI | 91.44313 | 1.6233501 | 3.0808962 | 5377 |
| 1.9444203 | 3.8488309 | DIVERGENT_PROMOT | | 1.6578774 | 3.1555192 | 5265 |
| 1.8236951 | 3.5398669 | PROMOTER | | | | |
| 1.9327888 | 3.8179251 | PROMOTEI | 550.7458 | | | |
| 1.8738817 | 3.665174 | PROMOTEI | 808.1059 | 1.938592 | 3.8333135 | 3241 |
| 1.9912015 | 3.9756796 | PROMOTEI | 145.6355 | 1.8769641 | 3.6730132 | 1872 |
| 1.59564 | 3.0222856 | PROMOTEI | 950.4133 | | | |
| 2.018009 | 4.0502445 | PROMOTEI | 134.8099 | 1.2883072 | 2.442413 | 3365 |
| 1.9404086 | 3.8381434 | PROMOTEI | 256.775 | | | |
| 1.8359005 | 3.5699417 | PROMOTEI | 381.6726 | 1.5092928 | 2.8467046 | 3345 |
| 2.2439413 | 4.7368937 | PROMOTER | | 1.9162911 | 3.7745145 | 4402 |
| 1.897101 | 3.72464 | DIVERGENT_PROMOT | | 1.6838667 | 3.2128791 | 253 |
| 1.9853774 | 3.9596623 | PROMOTER | | 1.9312379 | 3.813823 | 2425 |
| 1.64388 | 3.1250516 | PROMOTEI | 153.5457 | | | |
| 1.9625034 | 3.8973767 | PROMOTEI | 132.3911 | 1.6545224 | 3.1481895 | 2050 |
| 1.7112262 | 3.2743901 | DIVERGENT_PROMOT | | 1.6990765 | 3.2469305 | 996 |
| 2.0157156 | 4.0438111 | PROMOTEI | 208.7015 | | | |
| 1.9578645 | 3.8848651 | PROMOTER | | 1.1702775 | 2.2505498 | 3480 |
| 2.420674 | 5.354211 | PROMOTEI | 165.2042 | 1.9326982 | 3.8176853 | 2811 |
| 1.7454946 | 3.3530979 | DIVERGENT_PROMOT | | 1.5232306 | 2.8743398 | 3617 |
| 1.8252827 | 3.5437644 | DIVERGENT_PROMOT | | 1.4856571 | 2.800447 | 4267 |
| 2.0855963 | 4.244505 | PROMOTER | | 1.6294035 | 3.0938505 | 4621 |
| 2.6822114 | 6.4183898 | PROMOTEI | 434.8148 | 2.4855366 | 5.6004261 | 1904 |
| 1.5924945 | 3.0157033 | PROMOTEI | 304.8611 | | | |
| 1.915234 | 3.7717499 | PROMOTEI | 319.1277 | | | |
| 1.9989691 | 3.9971428 | PROMOTEI | 272.8333 | 1.5467328 | 2.9215476 | 3679 |
| 1.9607483 | 3.8926383 | PROMOTER | | | | |
| 2.0901303 | 4.2578653 | PROMOTER | | 2.1450024 | 4.42293 | 2560 |
| 1.6452088 | 3.1279312 | PROMOTER | | 1.4505899 | 2.7331979 | 2783 |
| 2.8014472 | 6.9713942 | PROMOTER | | 1.7415468 | 3.343935 | 3101 |
| 2.0533078 | 4.1505652 | DIVERGENT_PROMOTER | | | | |
| 1.5975099 | 3.0262054 | PROMOTEI | 803.8351 | 1.8008037 | 3.4841427 | 4521 |
| 2.153185 | 4.448087 | DIVERGENT_PROMOT | | 1.6232122 | 3.0806018 | 5481 |
| 2.0937989 | 4.2687063 | PROMOTER | | 1.7828262 | 3.440996 | 1166 |
| 1.7383019 | 3.3364223 | PROMOTEI | 411.1838 | | | |
| 1.8340675 | 3.5654088 | PROMOTEI | 134.8526 | | | |
| 1.7131811 | 3.27883 | PROMOTER | | 2.0224302 | 4.0626757 | 2584 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.8462038 | 3.5955284 | PROMOTER | | | | |
| 1.8784982 | 3.6769211 | PROMOTEI | 359.7066 | | | |
| 1.9370757 | 3.8292868 | PROMOTEI | 767.1488 | 2.3419304 | 5.0698055 | 16 |
| 1.8886971 | 3.7030065 | PROMOTEI | 162.1998 | 1.497008 | 2.8225673 | 2633 |
| 2.6399302 | 6.2330151 | PROMOTEI | 346.9359 | 1.4184984 | 2.6730714 | 5354 |
| 1.7092738 | 3.2699618 | PROMOTEI | 608.384 | 1.5066748 | 2.8415435 | 4863 |
| 2.2846973 | 4.8726186 | PROMOTEI | 129.6263 | 2.2839482 | 4.8700892 | 412 |
| 1.6486446 | 3.1353893 | PROMOTEI | 325.3038 | 1.8726898 | 3.6621472 | 2897 |
| 1.9977582 | 3.9937892 | PROMOTER | | | | |
| 1.7411578 | 3.3430335 | PROMOTEI | 4872.564 | | | |
| 2.164039 | 4.481678 | PROMOTEI | 448.9347 | | | |
| 2.1040723 | 4.2992121 | PROMOTEI | 201.7275 | 1.6909225 | 3.2286309 | 2545 |
| 2.0192518 | 4.0537351 | PROMOTER | | | | |
| 1.633706 | 3.103091 | DIVERGENT_PROMOT | | 1.6697344 | 3.1815602 | 4340 |
| 2.0297353 | 4.0832992 | PROMOTEI | 263.1079 | 1.9507774 | 3.8658279 | 2454 |
| 1.9157293 | 3.773045 | PROMOTEI | 1304.474 | 1.4676545 | 2.7657188 | 3223 |
| 1.932037 | 3.8159361 | PROMOTEI | 159.0864 | 1.2670293 | 2.4066549 | 1661 |
| 1.9571224 | 3.8828673 | PROMOTEI | 125.5498 | | | |
| 1.677407 | 3.1985255 | PROMOTEI | 130.4187 | 1.5904903 | 3.0115168 | 4365 |
| 1.9364277 | 3.8275672 | PROMOTEI | 174.5659 | | | |
| 1.976366 | 3.9350064 | PROMOTEI | 2396.804 | 2.2903428 | 4.8917233 | 99 |
| 1.6665354 | 3.1745133 | PROMOTEI | 151.627 | 1.3375362 | 2.5271936 | 3904 |
| 1.7011238 | 3.2515414 | DIVERGENT_PROMOT | | 2.0259492 | 4.0725974 | 606 |
| 1.9282858 | 3.806027 | PROMOTEI | 189.8272 | 2.3125167 | 4.9674887 | 1416 |
| 1.8916603 | 3.7106201 | DIVERGENT_PROMOTER | | | | |
| 2.8927822 | 7.4270135 | PROMOTER | | 1.0614655 | 2.0870505 | 5585 |
| 1.8982867 | 3.7277024 | PROMOTER | | 2.094062 | 4.2694848 | 76 |
| 2.010318 | 4.0287101 | PROMOTEI | 383.348 | 1.9577725 | 3.8846174 | 3380 |
| 1.7096734 | 3.2708677 | PROMOTER | | | | |
| 2.7837508 | 6.8864039 | PROMOTEI | 156.8373 | 2.1019144 | 4.2927864 | 5154 |
| 1.7011489 | 3.251598 | PROMOTEI | 624.0067 | 1.9201059 | 3.7845084 | 1029 |
| 1.6495827 | 3.1374288 | PROMOTEI | 318.9042 | | | |
| 1.6515001 | 3.1416013 | PROMOTEI | 367.1216 | 2.0893147 | 4.2554588 | 2309 |
| 1.8381395 | 3.5754864 | PROMOTEI | 120.7922 | | | |
| 2.039358 | 4.1106257 | PROMOTEI | 3724.185 | 1.6228964 | 3.0799275 | 1280 |
| 1.8332684 | 3.5634345 | PROMOTER | | 1.8012292 | 3.4851704 | 3021 |
| 1.6551996 | 3.1496676 | PROMOTER | | 1.8439845 | 3.5900016 | 1824 |
| 2.1044488 | 4.3003343 | PROMOTER | | | | |
| 1.9565638 | 3.8813642 | PROMOTEI | 127.822 | | | |
| 2.1608503 | 4.4717834 | PROMOTEI | 4019.758 | 1.3464935 | 2.5429331 | 3423 |
| 2.2132068 | 4.6370484 | PROMOTEI | 1988.908 | | | |
| 1.9604952 | 3.8919555 | PROMOTER | | 1.6333996 | 3.102432 | 3431 |
| 2.0527039 | 4.1488281 | PROMOTEI | 312.9589 | 1.9116869 | 3.7624878 | 4775 |
| 2.2245424 | 4.6736264 | PROMOTER | | | | |
| 1.9704877 | 3.9190058 | PROMOTEI | 287.1436 | 1.8214558 | 3.5343767 | 2166 |
| 2.3455157 | 5.0824203 | PROMOTEI | 182.4404 | 1.1986567 | 2.2952586 | 3844 |
| 1.8043487 | 3.4927145 | PROMOTER | | | | |
| 2.1747003 | 4.5149196 | PROMOTEI | 1635.606 | 2.32408 | 5.0074635 | 408 |
| 1.6148489 | 3.0627952 | PROMOTEI | 374.7208 | | | |
| 1.8476733 | 3.5991926 | PROMOTEI | 128.1499 | 1.7226828 | 3.3004959 | 3176 |
| 1.6967517 | 3.2417025 | PROMOTEI | 261.4229 | 1.7699685 | 3.4104651 | 1997 |
| 1.7557672 | 3.3770586 | PROMOTER | | 1.7460508 | 3.3543909 | 3491 |
| 2.0529099 | 4.1494206 | PROMOTEI | 158.2232 | | | |
| 1.5876944 | 3.0056862 | PROMOTEI | 112.6382 | 1.8542649 | 3.6156747 | 4674 |
| 1.886545 | 3.6974868 | DIVERGENT_PROMOT | | 1.7034606 | 3.2568124 | 2858 |
| 1.9618384 | 3.8955807 | PROMOTEI | 118.4083 | | | |
| 1.9379514 | 3.8316118 | PROMOTEI | 870.1858 | | | |
| 1.9558778 | 3.879519 | PROMOTEI | 286.6361 | 2.1053016 | 4.302877 | 1894 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.7656897 | 3.4003652 | PROMOTER | | 1.4248983 | 2.6849557 | 702 |
| 2.1841402 | 4.5445587 | PROMOTEI | 120.1187 | 2.071759 | 4.2039893 | 5179 |
| 2.0225823 | 4.063104 | PROMOTER | | 1.4854426 | 2.8000306 | 3434 |
| 1.8963957 | 3.7228196 | PROMOTER | | 1.4941374 | 2.8169567 | 4219 |
| 1.690157 | 3.2269182 | PROMOTER | | 1.6841977 | 3.2136163 | 2530 |
| 2.3665113 | 5.1569258 | PROMOTER | | 1.3694552 | 2.5837298 | 3858 |
| 2.101421 | 4.2913186 | PROMOTEI | 16913.88 | 1.8247603 | 3.5424815 | 1372 |
| 2.190186 | 4.5636432 | PROMOTEI | 392.1223 | 1.5241828 | 2.8762375 | 1980 |
| 2.0437071 | 4.1230361 | PROMOTEI | 1650.713 | 1.4443146 | 2.7213351 | 3002 |
| 1.9105581 | 3.7595451 | PROMOTEI | 1546.323 | | | |
| 1.6828958 | 3.2107176 | PROMOTEI | 93.52377 | 2.4643157 | 5.5186512 | 1320 |
| 1.8476429 | 3.5991167 | PROMOTER | | 1.7850978 | 3.4464183 | 3023 |
| 1.9239291 | 3.7945508 | PROMOTER | | 1.8652643 | 3.6433467 | 4896 |
| 2.2209308 | 4.6619412 | PROMOTEI | 2604.671 | 1.6590095 | 3.1579963 | 1807 |
| 1.5977932 | 3.0267997 | PROMOTEI | 444.5523 | 1.4441259 | 2.7209791 | 2935 |
| 1.7658725 | 3.4007961 | PROMOTER | | | | |
| 1.7605938 | 3.3883756 | DIVERGENT_PROMOT | | 1.9126439 | 3.7649844 | 3087 |
| 1.5919237 | 3.0145104 | PROMOTEI | 151.7981 | | | |
| 1.7073509 | 3.2656064 | PROMOTEI | 170.7892 | 1.9997877 | 3.9994114 | 1676 |
| 2.3392696 | 5.0604637 | PROMOTER | | | | |
| 2.3186219 | 4.9885547 | DIVERGENT_PROMOT | | 1.4076858 | 2.6531124 | 2045 |
| 2.1737444 | 4.5119291 | PROMOTER | | | | |
| 1.8859249 | 3.6958979 | PROMOTER | | 1.6330512 | 3.1016829 | 733 |
| 2.2711942 | 4.8272254 | PROMOTEI | 93.73696 | 1.8391806 | 3.5780675 | 2891 |
| 1.8345048 | 3.5664897 | PROMOTER | | | | |
| 2.2183895 | 4.6537364 | PROMOTER | | 2.271549 | 4.8284127 | 1262 |
| 1.7558808 | 3.3773245 | PROMOTEI | 256.8543 | | | |
| 1.6740448 | 3.1910801 | PROMOTER | | 0.9125247 | 1.8823367 | 5341 |
| 1.6893998 | 3.225225 | PROMOTEI | 2320.963 | 1.6187855 | 3.0711639 | 4068 |
| 1.9153174 | 3.7719679 | PROMOTEI | 996.6646 | | | |
| 1.9853734 | 3.9596513 | PROMOTER | | | | |
| 2.271888 | 4.8295474 | PROMOTEI | 182.0018 | | | |
| 2.2332218 | 4.7018281 | PROMOTEI | 238.3416 | 1.7115802 | 3.2751936 | 1173 |
| 1.7783033 | 3.4302252 | PROMOTER | | 1.5265051 | 2.8808711 | 2506 |
| 1.8490496 | 3.6026278 | PROMOTEI | 1157.79 | | | |
| 2.349677 | 5.0971012 | PROMOTEI | 192.5159 | 1.6940271 | 3.2355862 | 3742 |
| 1.9624784 | 3.8973092 | DIVERGENT_PROMOT | | 1.5505624 | 2.9293131 | 4710 |
| 1.7534238 | 3.3715776 | PROMOTEI | 214.5584 | 2.1404858 | 4.4091049 | 2844 |
| 1.9944589 | 3.9846663 | PROMOTEI | 443.6686 | | | |
| 1.8618171 | 3.6346516 | DIVERGENT_PROMOTER | | | | |
| 2.0760698 | 4.2165697 | DIVERGENT_PROMOTER | | | | |
| 1.7063444 | 3.2633289 | PROMOTER | | | | |
| 1.7788516 | 3.4315291 | PROMOTER | | 1.8800826 | 3.6809613 | 5003 |
| 1.9637512 | 3.9007491 | PROMOTER | | 1.9891434 | 3.9700121 | 2907 |
| 2.3324733 | 5.0366808 | PROMOTER | | | | |
| 2.5683262 | 5.931209 | PROMOTEI | 93.63394 | | | |
| 1.8485779 | 3.6014501 | PROMOTER | | 1.8085492 | 3.5028985 | 5331 |
| 1.7714704 | 3.4140174 | PROMOTER | | 1.8228363 | 3.5377603 | 1425 |
| 1.7644371 | 3.3974142 | PROMOTEI | 1344.3 | 1.3158461 | 2.4894829 | 3376 |
| 2.3361561 | 5.0495545 | PROMOTEI | 177.5311 | 1.7359939 | 3.331089 | 3097 |
| 1.6511142 | 3.1407611 | PROMOTEI | 153.2033 | | | |
| 1.8382316 | 3.5757146 | DIVERGENT_PROMOT | | 1.7049423 | 3.2601589 | 2230 |
| 2.1826222 | 4.5397794 | PROMOTEI | 128.1647 | 1.3170005 | 2.4914757 | 4525 |
| 2.1144447 | 4.3302331 | PROMOTER | | 2.0241559 | 4.0675382 | 3386 |
| 1.88554 | 3.694912 | PROMOTEI | 451.1117 | 1.5404992 | 2.9089514 | 2526 |
| 2.2155907 | 4.644717 | PROMOTEI | 299.8295 | | | |
| 1.7312906 | 3.3202471 | PROMOTEI | 322.3008 | 2.2897413 | 4.8896842 | 985 |
| 1.9711564 | 3.9208227 | PROMOTEI | 122.4637 | 2.0415447 | 4.1168609 | 1192 |

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|---|---|---|---|---|---|---|
| 2.4280539 | 5.3816699 | PROMOTEI | 1519.958 | | | |
| 1.7231381 | 3.3015377 | DIVERGENT_PROMOT | | 1.3550438 | 2.5580488 | 3661 |
| 1.6766692 | 3.1968902 | PROMOTEI | 484.9438 | | | |
| 1.8498455 | 3.6046158 | PROMOTEI | 312.8405 | 1.205491 | 2.3061574 | 3262 |
| 1.7607623 | 3.3887714 | PROMOTEI | 361.4875 | 1.7684596 | 3.4069 | 1851 |
| 1.8370289 | 3.572735 | PROMOTEI | 91.82077 | 2.0560424 | 4.15844 | 2683 |
| 1.6181062 | 3.0697182 | PROMOTER | | 1.417968 | 2.6720889 | 3772 |
| 2.4225092 | 5.3610263 | PROMOTER | | 1.9848269 | 3.9581517 | 1112 |
| 1.6840085 | 3.2131949 | PROMOTER | | 1.335609 | 2.52382 | 5301 |
| 1.7086235 | 3.2684882 | DIVERGENT_PROMOT | | 1.7611756 | 3.3897423 | 1450 |
| 1.834721 | 3.5670242 | PROMOTEI | 430.769 | | | |
| 2.3257077 | 5.0131163 | PROMOTEI | 2166.887 | 1.6864939 | 3.2187352 | 5080 |
| 2.0987942 | 4.2835122 | DIVERGENT_PROMOT | | 2.3016965 | 4.930372 | 3773 |
| 1.9145411 | 3.7699388 | PROMOTEI | 3633.866 | 1.5376463 | 2.9032047 | 1911 |
| 2.0896044 | 4.2563135 | DIVERGENT_PROMOT | | 1.657466 | 3.1546195 | 5452 |

| Normalized | Normalized | Type | transcript in | Normalized | Normalized | Rank (P2-12H_R1R2) |
|---|---|---|---|---|---|---|
| 2.1300607 | 4.377359 | DIVERGENT_PROMOTER | | | | |
| 2.279506 | 4.8551168 | PROMOTEI | 1053.575 | 1.978181 | 3.93996 | 994 |
| 2.1387372 | 4.4037641 | DIVERGENT_PROMOTER | | | | |
| 2.552855 | 5.8679436 | PROMOTEI | 534.934 | 1.8496319 | 3.6040822 | 4430 |
| 2.05145 | 4.1452238 | PROMOTEI | 1423.852 | 1.6702957 | 3.1827982 | 505 |
| 2.0201933 | 4.0563814 | PROMOTEI | 145.7914 | | | |
| 2.0142276 | 4.0396424 | DIVERGENT_PROMOT | | 1.477288 | 2.7842485 | 2019 |
| 2.4995763 | 5.6551932 | PROMOTER | | 1.7349987 | 3.3287919 | 3651 |
| 2.5324566 | 5.78556 | PROMOTER | | 1.3106763 | 2.480578 | 5071 |
| 2.2252655 | 4.6759694 | PROMOTER | | 2.058988 | 4.1669391 | 240 |
| 2.0643847 | 4.1825555 | PROMOTEI | 868.885 | | | |
| 1.6926153 | 3.2324214 | PROMOTER | | 1.2636502 | 2.4010246 | 5435 |
| 1.9570122 | 3.8825707 | PROMOTEI | 1482.15 | 1.840834 | 3.5821705 | 377 |
| 2.2228916 | 4.6682816 | PROMOTEI | 344.2707 | 2.0906034 | 4.2592618 | 1529 |
| 1.7438751 | 3.349336 | PROMOTEI | 417.119 | | | |
| 2.8041213 | 6.9843279 | PROMOTEI | 1289.532 | 1.7944546 | 3.4688431 | 1978 |
| 2.645024 | 6.2550612 | DIVERGENT_PROMOTER | | | | |
| 2.4298346 | 5.3883165 | PROMOTEI | 2458.488 | | | |
| 1.7745047 | 3.4212053 | PROMOTER | | 1.0620449 | 2.0878888 | 2798 |
| 1.9805658 | 3.9464783 | PROMOTER | | | | |
| 2.3948185 | 5.2591094 | PROMOTER | | | | |
| 2.1170778 | 4.3381436 | PROMOTEI | 115.3841 | | | |
| 2.1790073 | 4.5284185 | PROMOTEI | 987.1461 | 1.4211596 | 2.6780068 | 3629 |
| 1.924246 | 3.7953844 | PROMOTEI | 271.5389 | 1.9958067 | 3.9883906 | 1816 |
| 1.9810836 | 3.9478949 | PROMOTEI | 123.3108 | | | |
| 2.6637318 | 6.3367004 | PROMOTER | | | | |
| 1.9733677 | 3.926837 | PROMOTER | | 1.5064135 | 2.8410289 | 5348 |
| 2.484287 | 5.5955774 | DIVERGENT_PROMOT | | 2.0693464 | 4.1969649 | 2388 |
| 2.0901403 | 4.2578948 | PROMOTEI | 102.6696 | | | |
| 2.8200924 | 7.0620763 | PROMOTEI | 894.2858 | | | |
| 2.3679638 | 5.1621204 | PROMOTER | | | | |
| 1.8583065 | 3.625818 | PROMOTEI | 681.3087 | 1.5986142 | 3.0285226 | 4570 |
| 2.1247973 | 4.3614181 | PROMOTER | | 2.0106018 | 4.0295027 | 3350 |
| 1.9872185 | 3.9647187 | PROMOTEI | 123.9818 | 1.8557384 | 3.6193695 | 2612 |
| 1.9211835 | 3.7873362 | PROMOTEI | 1092.204 | 1.997358 | 3.9926815 | 1058 |
| 2.2249358 | 4.674901 | PROMOTEI | 411.525 | 1.9800519 | 3.9450727 | 3471 |
| 1.7167555 | 3.2869636 | PROMOTEI | 350.0916 | | | |
| 2.2743294 | 4.8377271 | DIVERGENT_PROMOT | | 1.7048966 | 3.2600557 | 2782 |
| 2.0843446 | 4.240824 | PROMOTEI | 204.1715 | 1.9246346 | 3.7964068 | 2177 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.021028 | 4.058729 | PROMOTEI | 2696.021 | 1.6254013 | 3.0852797 | 2118 |
| 1.9882653 | 3.9675965 | DIVERGENT_PROMOTER | | | | |
| 2.585788 | 6.0034341 | PROMOTEI | 2598.324 | 2.274624 | 4.8387151 | 61 |
| 1.6458677 | 3.1293601 | PROMOTEI | 388.1238 | | | |
| 2.0584774 | 4.1654646 | PROMOTEI | 766.7198 | 1.619489 | 3.0726618 | 5448 |
| 1.7003062 | 3.2496992 | PROMOTER | | 1.338232 | 2.5284128 | 5506 |
| 2.5847464 | 5.9991013 | PROMOTER | | | | |
| 2.3496664 | 5.0970638 | PROMOTER | | 1.1029694 | 2.1479634 | 4417 |
| 2.2494013 | 4.7548548 | PROMOTEI | 1239.06 | | | |
| 2.0407262 | 4.1145259 | PROMOTER | | | | |
| 2.9951088 | 7.9729234 | PROMOTER | | | | |
| 1.9877515 | 3.9661837 | PROMOTER | | 1.9934384 | 3.9818487 | 2785 |
| 2.2173064 | 4.6502439 | DIVERGENT_PROMOTER | | | | |
| 1.8334583 | 3.5639036 | PROMOTEI | 999.4857 | 1.3966892 | 2.6329666 | 4400 |
| 1.9626466 | 3.8977636 | PROMOTEI | 609.1555 | 1.3039881 | 2.4691048 | 3917 |
| 2.4134316 | 5.3274 | PROMOTEI | 206.721 | | | |
| 1.6913077 | 3.229493 | PROMOTER | | | | |
| 2.0080347 | 4.0223391 | PROMOTEI | 2410.746 | 2.047376 | 4.1335347 | 975 |
| 1.8488202 | 3.602055 | PROMOTER | | | | |
| 2.111553 | 4.3215624 | PROMOTER | | | | |
| 2.1810403 | 4.5348043 | PROMOTEI | 662.8675 | 1.7593958 | 3.3855631 | 5340 |
| 2.3770888 | 5.1948742 | PROMOTEI | 409.3607 | 1.7611887 | 3.3897731 | 2135 |
| 1.6296066 | 3.0942861 | PROMOTEI | 98.91907 | | | |
| 1.9737152 | 3.9277829 | PROMOTER | | 1.7952075 | 3.4706539 | 2081 |
| 2.0888093 | 4.2539684 | PROMOTEI | 192.5876 | 1.3201048 | 2.4968425 | 4931 |
| 1.810307 | 3.5071691 | PROMOTEI | 152.536 | | | |
| 1.9106247 | 3.7597186 | PROMOTER | | 1.9282856 | 3.8060265 | 3857 |
| 1.8908136 | 3.708443 | PROMOTEI | 1781.952 | 2.1940289 | 4.5758156 | 620 |
| 1.753499 | 3.3717533 | DIVERGENT_PROMOTER | | | | |
| 2.6333318 | 6.2045725 | DIVERGENT_PROMOT | | 2.2099848 | 4.626704 | 280 |
| 1.89033 | 3.7072001 | PROMOTEI | 97.24357 | | | |
| 2.661183 | 6.3255152 | PROMOTEI | 211.2793 | 1.5617974 | 2.9522142 | 4175 |
| 2.2110558 | 4.6301399 | PROMOTEI | 1149.841 | | | |
| 1.7570801 | 3.3801332 | PROMOTER | | 1.4637122 | 2.7581716 | 4606 |
| 2.1974657 | 4.5867291 | DIVERGENT_PROMOT | | 1.6135114 | 3.059957 | 655 |
| 2.4179263 | 5.3440233 | PROMOTER | | | | |
| 1.7494273 | 3.3622507 | PROMOTEI | 819.6301 | 1.524933 | 2.8777335 | 1241 |
| 1.6785543 | 3.2010702 | PROMOTEI | 413.4667 | 1.5128331 | 2.8536989 | 3457 |
| 1.8660681 | 3.6453772 | PROMOTER | | 2.0773714 | 4.2203756 | 2850 |
| 1.5887705 | 3.007929 | PROMOTEI | 328.0329 | 1.3836937 | 2.6093558 | 3886 |
| 2.147825 | 4.4315918 | DIVERGENT_PROMOT | | 1.8551263 | 3.6178342 | 4391 |
| 2.4012794 | 5.2827143 | PROMOTEI | 569.4477 | 1.2988789 | 2.4603762 | 2885 |
| 2.6965804 | 6.4826352 | PROMOTER | | | | |
| 2.2585342 | 4.7850507 | PROMOTEI | 327.6436 | | | |
| 2.433803 | 5.4031585 | DIVERGENT_PROMOTER | | | | |
| 1.6594208 | 3.1588968 | PROMOTEI | 914.6683 | 1.4674675 | 2.7653604 | 4138 |
| 2.3094132 | 4.9568143 | PROMOTEI | 774.1631 | 1.6858773 | 3.2173598 | 4561 |
| 2.2132154 | 4.6370761 | PROMOTEI | 674.3591 | 1.60267 | 3.0370486 | 5369 |
| 1.888247 | 3.7018514 | PROMOTEI | 418.7185 | | | |
| 1.767004 | 3.4034644 | PROMOTER | | 1.6430535 | 3.1232618 | 5380 |
| 1.6655346 | 3.1723118 | DIVERGENT_PROMOTER | | | | |
| 1.6669692 | 3.1754679 | PROMOTEI | 825.2838 | 1.5161879 | 2.8603425 | 815 |
| 1.9303175 | 3.8113907 | DIVERGENT_PROMOT | | 1.9420676 | 3.8425595 | 4509 |
| 1.7047625 | 3.2597527 | DIVERGENT_PROMOT | | 1.3650272 | 2.5758118 | 3219 |
| 2.3335612 | 5.0404803 | PROMOTEI | 440.9583 | | | |
| 1.6400697 | 3.1168089 | PROMOTEI | 1256.795 | | | |
| 1.5895512 | 3.0095571 | DIVERGENT_PROMOTER | | | | |
| 1.7003942 | 3.2498975 | PROMOTER | | 1.6320825 | 3.099601 | 2523 |

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|---|---|---|---|---|---|---|
| 1.8312379 | 3.5584227 | PROMOTEI | 89.27377 | 1.2218577 | 2.3324687 | 4390 |
| 1.6678051 | 3.1773083 | PROMOTEI | 4231.536 | | | |
| 1.7996724 | 3.4814116 | PROMOTEI | 677.9791 | | | |
| 2.2739832 | 4.8365664 | PROMOTEI | 607.2963 | | | |
| 1.827293 | 3.5487059 | PROMOTEI | 1398.088 | | | |
| 1.8636091 | 3.6391691 | PROMOTEI | 484.3943 | | | |
| 2.4075208 | 5.305618 | DIVERGENT_PROMOTER | | | | |
| 1.9369453 | 3.8289407 | PROMOTEI | 1997.909 | | | |
| 1.6614189 | 3.1632748 | DIVERGENT_PROMOT | | 1.5629872 | 2.9546499 | 5374 |
| 1.9674801 | 3.9108443 | PROMOTER | | 1.4277089 | 2.6901915 | 3607 |
| 1.8880248 | 3.7012813 | PROMOTEI | 344.3292 | 0.9856066 | 1.9801456 | 4974 |
| 1.8016452 | 3.4861755 | DIVERGENT_PROMOTER | | | | |
| 1.6951047 | 3.2380038 | PROMOTEI | 182.3857 | | | |
| 2.0537128 | 4.1517305 | PROMOTER | | 2.0810332 | 4.2311012 | 3716 |
| 2.6609335 | 6.3244214 | PROMOTEI | 2092.104 | 1.5484041 | 2.9249341 | 3154 |
| 2.0857768 | 4.245036 | PROMOTEI | 568.187 | | | |
| 2.5010858 | 5.6611133 | PROMOTEI | 379.3467 | 1.0763432 | 2.1086844 | 2455 |
| 2.311867 | 4.9652522 | DIVERGENT_PROMOTER | | | | |
| 2.1165092 | 4.3364341 | PROMOTEI | 418.3998 | | | |
| 2.2556036 | 4.7753405 | PROMOTEI | 99.71265 | | | |
| 2.0232024 | 4.0648508 | DIVERGENT_PROMOTER | | | | |
| 2.216432 | 4.6474263 | PROMOTEI | 237.5534 | | | |
| 2.0285265 | 4.0798794 | PROMOTER | | | | |
| 2.575158 | 5.9593625 | PROMOTEI | 376.7094 | 1.8630177 | 3.6376776 | 2541 |
| 2.4096127 | 5.3133167 | PROMOTEI | 616.6323 | | | |
| 1.7311912 | 3.3200183 | PROMOTEI | 122.1474 | | | |
| 1.92406 | 3.7948951 | PROMOTEI | 150.5013 | 1.614256 | 3.0615367 | 3674 |
| 1.7358109 | 3.3306665 | PROMOTEI | 1883.163 | | | |
| 1.9647645 | 3.9034898 | PROMOTEI | 435.5381 | | | |
| 2.5762715 | 5.9639638 | PROMOTEI | 312.6628 | | | |
| 1.862063 | 3.6352712 | PROMOTEI | 1090.774 | | | |
| 2.4340932 | 5.4042454 | PROMOTEI | 531.3867 | 1.621119 | 3.0761354 | 1694 |
| 1.809461 | 3.5051131 | PROMOTEI | 2029.283 | | | |
| 1.8458098 | 3.5945466 | DIVERGENT_PROMOTER | | | | |
| 1.8695418 | 3.6541651 | PROMOTEI | 642.5056 | | | |
| 2.0446608 | 4.1257626 | PROMOTEI | 230.8669 | | | |
| 2.0561323 | 4.1586991 | PROMOTEI | 462.6407 | | | |
| 1.8659753 | 3.6451427 | PROMOTEI | 685.5911 | 1.9626331 | 3.8977271 | 1256 |
| 1.698707 | 3.246099 | PROMOTEI | 953.5919 | | | |
| 2.1036751 | 4.2980287 | PROMOTER | | 2.014245 | 4.0396912 | 3864 |
| 2.1741662 | 4.5132485 | DIVERGENT_PROMOTER | | | | |
| 1.968468 | 3.9135232 | PROMOTER | | 2.089394 | 4.2556928 | 850 |
| 2.2667012 | 4.8122153 | DIVERGENT_PROMOT | | 1.8514464 | 3.6086179 | 1106 |
| 1.8434628 | 3.5887037 | PROMOTER | | | | |
| 2.0435116 | 4.1224774 | PROMOTEI | 122.7166 | | | |
| 1.9128602 | 3.765549 | PROMOTER | | | | |
| 1.8982663 | 3.7276497 | PROMOTER | | 2.2906551 | 4.8927823 | 49 |
| 2.4309087 | 5.3923297 | PROMOTEI | 259.2986 | | | |
| 2.5084898 | 5.6902412 | PROMOTER | | | | |
| 2.7608893 | 6.7781394 | PROMOTEI | 650.0453 | | | |
| 1.6232364 | 3.0806535 | DIVERGENT_PROMOT | | 1.1852815 | 2.2740776 | 3218 |
| 2.1031559 | 4.2964821 | PROMOTER | | | | |
| 2.261272 | 4.7941399 | PROMOTEI | 1847.058 | | | |
| 2.2104397 | 4.6281631 | PROMOTER | | | | |
| 2.285308 | 4.8746816 | PROMOTER | | | | |
| 1.8120184 | 3.511332 | PROMOTER | | | | |
| 2.1651375 | 4.4850918 | PROMOTEI | 671.8309 | 1.6096247 | 3.0517244 | 2229 |
| 2.0572 | 4.161778 | PROMOTEI | 167.9782 | | | |

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|---|---|---|---|---|---|---|
| 1.8111867 | 3.5093083 | PROMOTEI | 1852.264 | | | |
| 2.2759604 | 4.8431994 | PROMOTEI | 490.3866 | 1.6938735 | 3.2352417 | 3736 |
| 1.5924752 | 3.015663 | PROMOTEI | 158.4037 | | | |
| 2.2776546 | 4.8488902 | PROMOTER | | | | |
| 1.635245 | 3.106403 | DIVERGENT_PROMOTER | | | | |
| 1.7199047 | 3.2941465 | PROMOTEI | 141.7252 | | | |
| 2.6685224 | 6.3577769 | PROMOTEI | 147.2379 | | | |
| 2.1636348 | 4.4804226 | PROMOTEI | 245.2751 | 2.1557622 | 4.4560401 | 1721 |
| 1.9798905 | 3.9446314 | PROMOTEI | 636.9106 | 1.5528826 | 2.9340279 | 5254 |
| 1.7237933 | 3.3030374 | DIVERGENT_PROMOT | | 1.4680436 | 2.7664649 | 4503 |
| 2.129893 | 4.3768502 | PROMOTEI | 494.0068 | 1.0764945 | 2.1089056 | 3894 |
| 1.7117057 | 3.2754785 | PROMOTER | | | | |
| 1.9703989 | 3.9187646 | PROMOTER | | 1.7560343 | 3.3776839 | 3733 |
| 2.2684922 | 4.8181931 | DIVERGENT_PROMOT | | 2.1420968 | 4.4140311 | 380 |
| 2.063219 | 4.1791774 | DIVERGENT_PROMOTER | | | | |
| 2.3652742 | 5.1525057 | DIVERGENT_PROMOTER | | | | |
| 2.7523456 | 6.7381176 | PROMOTEI | 4838.691 | 1.5195967 | 2.8671089 | 4661 |
| 1.6335863 | 3.1028335 | DIVERGENT_PROMOTER | | | | |
| 1.828782 | 3.5523704 | PROMOTEI | 394.6784 | | | |
| 2.7294688 | 6.632114 | PROMOTEI | 212.9776 | | | |
| 1.889784 | 3.7057974 | PROMOTER | | | | |
| 1.6012653 | 3.034093 | PROMOTEI | 94.88509 | | | |
| 2.1210155 | 4.3500003 | PROMOTEI | 2119.854 | 2.1023695 | 4.2941408 | 860 |
| 1.6920582 | 3.2311735 | PROMOTER | | 1.96813 | 3.9126064 | 2913 |
| 2.3064182 | 4.9465347 | PROMOTEI | 265.2573 | | | |
| 2.3298798 | 5.0276346 | PROMOTEI | 4257.365 | 1.9357342 | 3.8257277 | 1965 |
| 1.7676477 | 3.4049832 | PROMOTEI | 298.2318 | | | |
| 1.9849396 | 3.9584609 | PROMOTEI | 1372.278 | | | |
| 1.6978567 | 3.2441864 | PROMOTEI | 302.7046 | | | |
| 2.1871908 | 4.5541784 | PROMOTER | | 1.8552068 | 3.6180361 | 4168 |
| 2.0948927 | 4.2719439 | PROMOTER | | | | |
| 1.8556886 | 3.6192446 | PROMOTEI | 149.7237 | | | |
| 1.8678575 | 3.6499014 | DIVERGENT_PROMOT | | 1.7708591 | 3.4125711 | 3121 |
| 2.1231508 | 4.3564434 | PROMOTEI | 159.2886 | 0.8899112 | 1.8530621 | 5045 |
| 2.344361 | 5.0783541 | PROMOTEI | 160.5789 | | | |
| 2.1718314 | 4.5059503 | PROMOTEI | 620.0839 | | | |
| 2.0846353 | 4.2416786 | PROMOTER | | | | |
| 1.725137 | 3.3061152 | DIVERGENT_PROMOTER | | | | |
| 1.7561646 | 3.3779889 | PROMOTEI | 109.6729 | | | |
| 1.6942414 | 3.2360668 | PROMOTEI | 948.3173 | 1.2574838 | 2.390784 | 5164 |
| 1.7002376 | 3.2495447 | PROMOTEI | 494.695 | | | |
| 2.2066176 | 4.615918 | PROMOTER | | | | |
| 2.3379846 | 5.0559584 | PROMOTEI | 660.6837 | | | |
| 1.7307638 | 3.3190349 | DIVERGENT_PROMOTER | | | | |
| 2.2613602 | 4.794433 | PROMOTEI | 181.4277 | | | |
| 2.354381 | 5.1137478 | DIVERGENT_PROMOTER | | | | |
| 2.087298 | 4.2495144 | PROMOTEI | 139.5818 | | | |
| 2.1428804 | 4.4164292 | PROMOTER | | | | |
| 2.4807146 | 5.5817387 | PROMOTEI | 244.2557 | | | |
| 1.9689176 | 3.914743 | PROMOTER | | | | |
| 2.1030836 | 4.2962668 | PROMOTER | | 1.7140083 | 3.2807105 | 3895 |
| 1.7870587 | 3.4511058 | PROMOTEI | 517.0087 | 1.2858156 | 2.4381985 | 4850 |
| 1.8157685 | 3.5204711 | PROMOTER | | 1.43372 | 2.7014238 | 4560 |
| 2.3137434 | 4.9717143 | DIVERGENT_PROMOT | | 1.4930035 | 2.8147436 | 4283 |
| 1.9139699 | 3.7684465 | PROMOTEI | 108.4561 | | | |
| 2.4570434 | 5.4909029 | PROMOTEI | 125.3625 | 1.7773571 | 3.4279762 | 5225 |
| 1.8437072 | 3.5893117 | PROMOTEI | 224.435 | | | |
| 1.7612138 | 3.3898321 | DIVERGENT_PROMOT | | 2.1356366 | 4.3943098 | 2409 |

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|---|---|---|---|---|---|---|
| 1.6853777 | 3.2162459 | PROMOTEI | 611.0683 | | | |
| 1.653116 | 3.145122 | DIVERGENT_PROMOT | 1.4989774 | 2.826423 | | 3768 |
| 1.8466885 | 3.5967366 | PROMOTER | | | | |
| 1.7283553 | 3.3134986 | PROMOTEI | 1237.076 | | | |
| 1.7998997 | 3.4819602 | PROMOTER | | | | |
| 1.8142078 | 3.5166647 | DIVERGENT_PROMOTER | | | | |
| 1.5963798 | 3.0238358 | PROMOTEI | 964.0632 | 1.6766148 | 3.1967697 | 4247 |
| 1.606199 | 3.0444867 | PROMOTEI | 140.0532 | | | |
| 2.2743948 | 4.8379464 | PROMOTEI | 159.6487 | 1.3523049 | 2.5531971 | 4258 |
| 2.8830538 | 7.3771 | DIVERGENT_PROMOTER | | | | |
| 2.26969 | 4.822195 | PROMOTEI | 2128.096 | | | |
| 1.7517956 | 3.3677746 | PROMOTER | | | | |
| 1.6585984 | 3.1570966 | PROMOTER | | | | |
| 2.3265011 | 5.015874 | PROMOTER | | | | |
| 1.6032203 | 3.0382073 | PROMOTEI | 195.0697 | | | |
| 1.9657056 | 3.906037 | PROMOTEI | 691.8871 | | | |
| 1.8794733 | 3.6794071 | PROMOTEI | 198.2952 | | | |
| 1.8528398 | 3.6121049 | PROMOTEI | 109.0906 | 1.6379238 | 3.1121763 | 2577 |
| 1.9609987 | 3.893314 | PROMOTEI | 4233.088 | 2.378524 | 5.2000446 | 1690 |
| 1.8908046 | 3.7084199 | PROMOTEI | 6915.497 | 1.5279955 | 2.8838487 | 1896 |
| 2.2561388 | 4.7771123 | PROMOTEI | 279.7865 | 1.3431932 | 2.5371225 | 3030 |
| 1.8297632 | 3.5547872 | PROMOTEI | 256.8216 | | | |
| 2.4074175 | 5.3052381 | PROMOTEI | 314.2263 | 1.7523028 | 3.3689588 | 2883 |
| 1.9679035 | 3.9119922 | PROMOTEI | 275.277 | | | |
| 1.6162294 | 3.0657274 | DIVERGENT_PROMOTER | | | | |
| 2.2820501 | 4.863686 | PROMOTER | | | | |
| 2.018118 | 4.0505505 | PROMOTER | | 1.5247527 | 2.8773739 | 4492 |
| 2.0522287 | 4.1474618 | PROMOTEI | 262.1652 | 1.5982536 | 3.0277658 | 2017 |
| 2.3103087 | 4.959892 | PROMOTER | | 1.3652769 | 2.5762577 | 1601 |
| 2.232282 | 4.6987663 | PROMOTEI | 1550.677 | | | |
| 1.6942997 | 3.2361976 | PROMOTEI | 2056.127 | 1.7640607 | 3.3965279 | 115 |
| 2.5229526 | 5.7475719 | DIVERGENT_PROMOT | 1.7033197 | 3.2564943 | | 1151 |
| 1.7060987 | 3.2627732 | PROMOTEI | 1471.481 | | | |
| 2.3652754 | 5.15251 | DIVERGENT_PROMOTER | | | | |
| 1.9755682 | 3.932831 | PROMOTEI | 253.5165 | 1.5648218 | 2.9584096 | 1877 |
| 2.056107 | 4.1586262 | PROMOTER | | | | |
| 2.0404935 | 4.1138623 | PROMOTER | | | | |
| 1.6522813 | 3.1433029 | DIVERGENT_PROMOTER | | | | |
| 1.7194468 | 3.2931011 | DIVERGENT_PROMOTER | | | | |
| 1.8182333 | 3.5264909 | PROMOTER | | 1.5427432 | 2.9134796 | 2876 |
| 1.7352779 | 3.3294362 | DIVERGENT_PROMOTER | | | | |
| 1.8385088 | 3.5764017 | PROMOTER | | | | |
| 1.7424318 | 3.3459869 | PROMOTER | | | | |
| 1.6670523 | 3.1756508 | PROMOTER | | | | |
| 1.9610184 | 3.8933672 | DIVERGENT_PROMOTER | | | | |
| 2.0601246 | 4.1702232 | PROMOTEI | 883.134 | 1.6877264 | 3.2214862 | 1530 |
| 1.7811812 | 3.4370747 | PROMOTEI | 437.6356 | | | |
| 2.4768589 | 5.5668411 | PROMOTEI | 1374.489 | | | |
| 2.1690526 | 4.4972797 | DIVERGENT_PROMOTER | | | | |
| 2.048459 | 4.1366388 | PROMOTEI | 93.09155 | | | |
| 2.0295584 | 4.0827986 | PROMOTEI | 927.158 | 1.7280921 | 3.3128941 | 3870 |
| 1.6165357 | 3.0663783 | PROMOTEI | 272.5314 | | | |
| 1.9257921 | 3.799454 | PROMOTEI | 290.5013 | 2.0325603 | 4.0913028 | 4209 |
| 1.9727545 | 3.9251683 | DIVERGENT_PROMOT | 1.9703753 | 3.9187005 | | 4683 |
| 1.7995311 | 3.4810707 | PROMOTEI | 503.6905 | 1.492356 | 2.8134806 | 4054 |
| 1.9077646 | 3.7522725 | PROMOTEI | 593.7806 | 1.6578201 | 3.1553939 | 4114 |
| 1.6068314 | 3.0458215 | PROMOTEI | 700.5128 | | | |
| 1.9908946 | 3.974834 | PROMOTEI | 2184.052 | 2.3805456 | 5.2073364 | 164 |

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|---|---|---|---|---|---|---|
| 2.1825235 | 4.5394688 | PROMOTEI | 1393.228 | | | |
| 1.6110075 | 3.0546509 | DIVERGENT_PROMOTER | | | | |
| 1.6789974 | 3.2020535 | PROMOTEI | 871.5081 | 1.7290746 | 3.315151 | 2959 |
| 1.8168521 | 3.5231163 | PROMOTEI | 312.6967 | | | |
| 1.7087013 | 3.2686645 | PROMOTER | | | | |
| 2.132645 | 4.3852072 | PROMOTEI | 257.3077 | | | |
| 2.2478538 | 4.7497573 | DIVERGENT_PROMOT | 1.8533474 | 3.613376 | 3731 | |
| 1.9137151 | 3.767781 | PROMOTEI | 108.4389 | 1.936062 | 3.8265971 | 4442 |
| 2.3564146 | 5.1209611 | PROMOTEI | 270.9424 | 1.6430765 | 3.1233116 | 4796 |
| 1.7145368 | 3.2819126 | DIVERGENT_PROMOT | 1.5575083 | 2.9434504 | 4635 | |
| 1.8213947 | 3.534227 | PROMOTEI | 1332.719 | | | |
| 2.2338004 | 4.7037142 | DIVERGENT_PROMOTER | | | | |
| 1.795727 | 3.4719039 | DIVERGENT_PROMOTER | | | | |
| 2.210616 | 4.6287287 | PROMOTEI | 87.8842 | | | |
| 1.9336051 | 3.820086 | DIVERGENT_PROMOT | 1.7733467 | 3.4184604 | 3811 | |
| 1.9393101 | 3.835222 | PROMOTEI | 118.3379 | | | |
| 2.1456046 | 4.4247765 | PROMOTEI | 324.0791 | | | |
| 1.7335122 | 3.3253638 | PROMOTER | | | | |
| 2.0994875 | 4.2855712 | PROMOTEI | 149.3942 | 0.9587351 | 1.943605 | 4515 |
| 2.2263854 | 4.6796006 | PROMOTEI | 114.8965 | | | |
| 2.382649 | 5.214934 | PROMOTEI | 180.5801 | | | |
| 1.6472411 | 3.1323406 | PROMOTEI | 98.13789 | | | |
| 1.8269963 | 3.5479761 | PROMOTEI | 1351.072 | 1.7472672 | 3.3572203 | 2657 |
| 1.8170341 | 3.5235608 | DIVERGENT_PROMOTER | | | | |
| 1.6903783 | 3.2274132 | PROMOTER | | 2.285951 | 4.8768547 | 345 |
| 1.9256604 | 3.7991071 | PROMOTER | | | | |
| 1.6293219 | 3.0936755 | PROMOTEI | 135.7695 | | | |
| 2.4407866 | 5.4293768 | PROMOTEI | 527.6913 | | | |
| 1.749818 | 3.3631614 | PROMOTEI | 151.2737 | | | |
| 2.173933 | 4.512519 | DIVERGENT_PROMOT | 1.8111091 | 3.5091196 | 3755 | |
| 2.0437214 | 4.123077 | PROMOTER | | | | |
| 2.3195744 | 4.9918494 | DIVERGENT_PROMOTER | | | | |
| 1.7450439 | 3.3520505 | PROMOTER | | | | |
| 1.9797407 | 3.9442218 | PROMOTEI | 225.7195 | | | |
| 1.7538677 | 3.3726151 | PROMOTEI | 188.9357 | | | |
| 2.105728 | 4.3041489 | PROMOTEI | 202.1159 | | | |
| 2.0028756 | 4.0079808 | PROMOTEI | 2936.18 | 1.9883896 | 3.9679383 | 4319 |
| 2.0744417 | 4.2118139 | DIVERGENT_PROMOT | 1.9655946 | 3.9057364 | 2519 | |
| 2.6072023 | 6.0932093 | DIVERGENT_PROMOTER | | | | |
| 2.4028428 | 5.2884421 | PROMOTER | | | | |
| 1.8981361 | 3.7273133 | PROMOTEI | 1777.725 | 1.8147796 | 3.5180588 | 2352 |
| 2.214393 | 4.6408626 | PROMOTEI | 247.5987 | | | |
| 2.414856 | 5.3326624 | PROMOTER | | | | |
| 1.8575395 | 3.6238908 | PROMOTEI | 545.7009 | | | |
| 1.7340012 | 3.3264912 | DIVERGENT_PROMOTER | | | | |
| 1.9663122 | 3.9076796 | PROMOTEI | 843.7181 | | | |
| 1.63571 | 3.1074044 | PROMOTEI | 144.3777 | | | |
| 2.082202 | 4.2345304 | PROMOTEI | 1174.364 | 2.0738394 | 4.2100559 | 835 |
| 2.6221023 | 6.1564654 | PROMOTER | | | | |
| 1.7606844 | 3.3885884 | PROMOTER | | | | |
| 2.1557016 | 4.4558529 | DIVERGENT_PROMOT | 1.5147742 | 2.857541 | 1315 | |
| 2.1198235 | 4.3464077 | PROMOTEI | 397.3643 | | | |
| 1.7891535 | 3.4561205 | PROMOTEI | 127.7042 | | | |
| 1.9354777 | 3.8250476 | PROMOTEI | 939.7617 | | | |
| 1.6208862 | 3.075639 | PROMOTER | | | | |
| 1.6553212 | 3.1499331 | PROMOTEI | 116.2164 | 1.3218671 | 2.4998943 | 5494 |
| 1.672775 | 3.1882726 | PROMOTEI | 461.6561 | | | |
| 1.6036775 | 3.0391703 | PROMOTEI | 543.3641 | 1.1581049 | 2.2316409 | 5603 |

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|---|---|---|---|---|---|---|
| 1.8800069 | 3.6807682 | PROMOTEI | 1104.536 | | | |
| 1.9466077 | 3.8546709 | PROMOTEI | 512.6923 | 2.2805088 | 4.8584927 | 113 |
| 2.0364196 | 4.1022619 | PROMOTEI | 457.2737 | 1.9935194 | 3.9820723 | 3216 |
| 1.6507006 | 3.1398608 | PROMOTEI | 194.4857 | | | |
| 2.2676723 | 4.8154556 | DIVERGENT_PROMOT | | 1.4487185 | 2.7296548 | 5402 |
| 2.1380208 | 4.4015779 | PROMOTEI | 786.4874 | | | |
| 1.9106528 | 3.7597919 | PROMOTER | | | | |
| 2.0680485 | 4.1931909 | PROMOTER | | | | |
| 1.7707925 | 3.4124136 | PROMOTEI | 129.2666 | | | |
| 2.1158476 | 4.334446 | PROMOTEI | 875.0965 | 1.3740481 | 2.5919683 | 4772 |
| 1.7798778 | 3.4339709 | PROMOTEI | 414.0797 | | | |
| 1.8579888 | 3.6250196 | DIVERGENT_PROMOTER | | | | |
| 1.7617059 | 3.3909885 | PROMOTEI | 345.3091 | | | |
| 1.960269 | 3.8913453 | PROMOTEI | 362.1483 | | | |
| 1.6322571 | 3.0999761 | PROMOTEI | 161.9818 | | | |
| 1.820245 | 3.5314116 | PROMOTEI | 1478.389 | | | |
| 2.486349 | 5.6035807 | PROMOTEI | 295.6391 | | | |
| 1.9112774 | 3.76142 | PROMOTEI | 1305.399 | 1.3638269 | 2.5736697 | 2358 |
| 1.6458453 | 3.1293116 | PROMOTEI | 1205.637 | 1.3286041 | 2.5115954 | 4933 |
| 2.0440352 | 4.1239739 | PROMOTER | | | | |
| 1.8190159 | 3.5284043 | PROMOTEI | 94.44121 | | | |
| 2.026223 | 4.0733704 | PROMOTEI | 631.3627 | 2.0334504 | 4.0938277 | 951 |
| 2.5253954 | 5.757312 | PROMOTEI | 146.6173 | | | |
| 1.6289071 | 3.0927862 | PROMOTER | | | | |
| 1.8714495 | 3.6590002 | PROMOTEI | 3149.52 | | | |
| 1.8436761 | 3.5892343 | PROMOTEI | 78.73708 | | | |
| 1.765422 | 3.3997343 | PROMOTEI | 193.3517 | | | |

| Normalized | Normalized | Type | transcript in | Normalized | Normalized | Rank (P2-NS_R1R2) |
|---|---|---|---|---|---|---|
| 1.6641808 | 3.1693364 | INSIDE | 1205.333 | | | |
| 1.7895253 | 3.4570113 | INSIDE | | 1.8574678 | 3.6237107 | 1820 |
| 1.7374331 | 3.3344137 | INSIDE | 284.7299 | 1.7219399 | 3.2987968 | 5320 |
| 2.0159597 | 4.0444953 | INSIDE | 388.1852 | 2.339335 | 5.0606931 | 60 |
| 1.9635946 | 3.9003257 | INSIDE | 100.8769 | | | |
| 1.9450874 | 3.850611 | INSIDE | 258.2985 | | | |
| 1.6250008 | 3.0844234 | INSIDE | 154.2141 | 2.0336509 | 4.0943967 | 818 |
| 1.8466482 | 3.5966361 | INSIDE | 377.399 | 2.4653392 | 5.5225677 | 1367 |
| 2.1562262 | 4.4574734 | INSIDE | 780.6179 | 1.8219479 | 3.5355824 | 5092 |
| 1.6561468 | 3.1517362 | INSIDE | | | | |
| 1.6280873 | 3.0910292 | INSIDE | 4186.778 | | | |
| 1.86745 | 3.6488706 | INSIDE | | 1.7157912 | 3.2847674 | 1091 |
| 1.7424614 | 3.3460556 | INSIDE | | 2.20177 | 4.6004341 | 2996 |
| 1.9209907 | 3.7868301 | INSIDE | 856.277 | | | |
| 1.6462777 | 3.1302496 | INSIDE | 3437.965 | 1.9794722 | 3.9434879 | 550 |
| 1.7421713 | 3.3453828 | INSIDE | 100.1353 | | | |
| 1.7039843 | 3.2579948 | INSIDE | 295.6129 | 1.9629846 | 3.8986769 | 1077 |
| 1.8157147 | 3.5203398 | INSIDE | | 1.7642744 | 3.397031 | 907 |
| 1.6925346 | 3.2322406 | INSIDE | | | | |
| 1.9118686 | 3.7629617 | INSIDE | 111.8079 | | | |
| 1.8085002 | 3.5027796 | INSIDE | 607.9088 | 1.942125 | 3.8427124 | 845 |
| 1.586601 | 3.0034091 | INSIDE | 263.71 | 1.5256907 | 2.8792453 | 2412 |
| 1.7126392 | 3.2775986 | INSIDE | 503.0589 | | | |
| 1.607896 | 3.0480699 | INSIDE | 1227.98 | 1.656706 | 3.1529581 | 5774 |
| 1.6154163 | 3.064 | INSIDE | 1217.231 | 1.8170592 | 3.5236221 | 1273 |
| 1.7060262 | 3.2626092 | INSIDE | 117.8557 | 1.8579575 | 3.624941 | 1929 |
| 1.6448151 | 3.1270778 | INSIDE | 737.4813 | 2.0362327 | 4.1017305 | 4569 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.6579744 | 3.1557314 | INSIDE | | 2.3523808 | 5.1066628 | 3342 |
| 1.6333283 | 3.1022787 | INSIDE | 121.7141 | | | |
| 1.6603727 | 3.1609817 | INSIDE | 132.7177 | 2.0160801 | 4.0448329 | 1985 |
| 1.6883689 | 3.2229212 | INSIDE | | 1.6361945 | 3.1084481 | 2934 |
| 1.8919228 | 3.7112953 | INSIDE | 421.8677 | 2.2144747 | 4.6411255 | 2277 |
| 1.8609567 | 3.6324846 | INSIDE | 4648.278 | 1.4212313 | 2.6781399 | 3015 |
| 1.6045871 | 3.041087 | INSIDE | 117.5591 | 0.8144395 | 1.7586148 | 4792 |
| 1.6978728 | 3.2442226 | INSIDE | 173.0528 | 1.889183 | 3.7042539 | 3471 |
| 1.6129103 | 3.0586824 | INSIDE | 527.7981 | 1.666434 | 3.1742901 | 3729 |
| 1.80848 | 3.5027305 | INSIDE | 181.3971 | | | |
| 1.816853 | 3.5231185 | INSIDE | 386.188 | 1.0296743 | 2.0415633 | 3758 |
| 1.7276719 | 3.3119294 | INSIDE | 123.0554 | 1.9657097 | 3.9060481 | 2231 |
| 1.6769148 | 3.1974345 | INSIDE | 1874.011 | 1.7056141 | 3.2616774 | 5858 |
| 1.7655578 | 3.4000543 | INSIDE | | | | |
| 1.6397083 | 3.1160282 | INSIDE | 134.3031 | 1.0088922 | 2.0123653 | 3227 |
| 2.174497 | 4.5142834 | INSIDE | 115.4983 | | | |
| 1.6678916 | 3.1774988 | INSIDE | 142.1826 | 1.4295824 | 2.6936873 | 4851 |
| 1.7499036 | 3.3633609 | INSIDE | | | | |
| 1.9840165 | 3.9559289 | INSIDE | 119.7098 | | | |
| 1.7106726 | 3.2731338 | INSIDE | 5484.765 | 1.2412152 | 2.3639757 | 3252 |
| 1.8321196 | 3.5605981 | INSIDE | 865.9063 | 1.4885758 | 2.8061182 | 4910 |
| 1.9181648 | 3.7794199 | INSIDE | | 2.2467387 | 4.7460875 | 1628 |
| 1.6610875 | 3.1625483 | INSIDE | 1095.024 | | | |
| 1.8167663 | 3.5229068 | INSIDE | 5544.171 | 1.4745449 | 2.7789597 | 1622 |
| 1.700478 | 3.2500862 | INSIDE | 279.5238 | 2.1275384 | 4.3697126 | 3082 |
| 1.7113214 | 3.2746062 | INSIDE | 353.8496 | | | |
| 1.9624254 | 3.897166 | INSIDE | 103.462 | 1.1655407 | 2.2431727 | 954 |
| 1.6152464 | 3.0636392 | INSIDE | 106.7266 | 1.5962867 | 3.0236407 | 4862 |
| 1.778561 | 3.430838 | INSIDE | 139.8229 | 2.066572 | 4.1889016 | 3314 |
| 1.7733849 | 3.4185509 | INSIDE | | 1.7651284 | 3.3990425 | 2010 |
| 1.7060473 | 3.2626569 | INSIDE | | 1.1842587 | 2.272466 | 4825 |
| 1.681135 | 3.2068014 | INSIDE | | | | |
| 1.6425146 | 3.1220954 | INSIDE | 126.8279 | | | |
| 1.6388531 | 3.1141817 | INSIDE | | 1.750943 | 3.3657849 | 3049 |
| 1.8385315 | 3.576458 | INSIDE | 474.6024 | | | |
| 1.850391 | 3.605979 | INSIDE | 1519.194 | | | |
| 1.9420675 | 3.8425592 | INSIDE | 187.492 | 2.1870368 | 4.5536923 | 6263 |
| 1.6381059 | 3.1125692 | INSIDE | 709.7413 | 1.431097 | 2.6965168 | 1600 |
| 1.9125873 | 3.7648367 | INSIDE | 475.8784 | 1.8167526 | 3.5228733 | 4392 |
| 1.7890397 | 3.4558478 | INSIDE | 173.0395 | | | |
| 1.8744599 | 3.6666432 | INSIDE | 513.7062 | 1.6908113 | 3.228382 | 4816 |
| 1.8662065 | 3.6457269 | INSIDE | 337.0405 | | | |
| 1.605901 | 3.0438579 | INSIDE | | 1.2074951 | 2.3093632 | 3948 |
| 2.5563033 | 5.8819858 | INSIDE | 3287.983 | 2.408366 | 5.3087272 | 429 |
| 1.6213933 | 3.0767203 | INSIDE | 130.1738 | 1.6558441 | 3.151075 | 3194 |
| 1.6003073 | 3.0320789 | INSIDE | 153.2401 | 1.1596166 | 2.2339805 | 6049 |
| 1.7542819 | 3.3735836 | INSIDE | | | | |
| 1.5949451 | 3.0208302 | INSIDE | 140.2023 | | | |
| 1.6187232 | 3.0710313 | INSIDE | 840.3356 | 1.820601 | 3.5322832 | 3048 |
| 1.7130827 | 3.2786064 | INSIDE | | 1.3798454 | 2.6024048 | 2638 |
| 1.9696072 | 3.9166147 | INSIDE | 142.48 | | | |
| 1.8587449 | 3.6269199 | INSIDE | 615.9943 | 2.315339 | 4.977216 | 1129 |
| 1.7258437 | 3.3077351 | INSIDE | 2304.047 | | | |
| 2.0235744 | 4.0658991 | INSIDE | 169.6144 | 1.1841309 | 2.2722647 | 369 |
| 1.656904 | 3.1533909 | INSIDE | | 1.7333727 | 3.3250423 | 4538 |
| 1.6285955 | 3.0921183 | INSIDE | 2615.273 | | | |
| 1.8485651 | 3.6014181 | INSIDE | 131.6597 | | | |
| 1.8522447 | 3.6106153 | INSIDE | | 2.300977 | 4.9279137 | 158 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.762522 | 3.3929073 | INSIDE | 309.2328 | 1.6779041 | 3.1996278 | 2131 |
| 1.6922498 | 3.2316026 | INSIDE | | 1.9189414 | 3.7814549 | 4492 |
| 1.6864167 | 3.218563 | INSIDE | 101.0602 | | | |
| 1.6180189 | 3.0695324 | INSIDE | 132.6257 | | | |
| 1.6850107 | 3.2154278 | INSIDE | 145.0877 | | | |
| 1.8833762 | 3.6893744 | INSIDE | 209.1509 | | | |
| 1.6170617 | 3.0674965 | INSIDE | 291.8951 | | | |
| 1.6809813 | 3.2064598 | INSIDE | 1971.721 | | | |
| 1.5909344 | 3.012444 | INSIDE | 3135.627 | 1.1547339 | 2.2264325 | 6120 |
| 1.6186191 | 3.0708097 | INSIDE | 651.0538 | 2.086282 | 4.2465228 | 3324 |
| 1.7316741 | 3.3211298 | INSIDE | | | | |
| 1.9964249 | 3.9901 | INSIDE | 159.021 | | | |
| 1.8592088 | 3.6280864 | INSIDE | 155.0118 | | | |
| 1.6658388 | 3.1729808 | INSIDE | 826.5395 | 0.8396721 | 1.7896433 | 3826 |
| 1.9703704 | 3.9186872 | INSIDE | | | | |

**enes)**

| Normalized | Normalized | Type | transcript in | Normalized | Normalized | Rank (P2-12H_R1R2) |
|---|---|---|---|---|---|---|
| 2.8375747 | 7.1481737 | INSIDE | 111.167 | 2.0925217 | 4.2649289 | 433 |
| 2.2998898 | 4.9242015 | INSIDE | | 1.4999393 | 2.8283081 | 485 |
| 2.2629132 | 4.7995968 | INSIDE | | 1.859372 | 3.6284968 | 406 |
| 2.2975895 | 4.9163564 | INSIDE | 808.4681 | 1.8624985 | 3.6363687 | 367 |
| 1.8664103 | 3.646242 | INSIDE | 118.0477 | 1.7875012 | 3.4521645 | 194 |
| 2.2097898 | 4.6260787 | INSIDE | | 1.6224446 | 3.0789631 | 1741 |
| 2.3097856 | 4.9580939 | INSIDE | 119.7771 | 2.3015075 | 4.9297261 | 171 |
| 2.6143115 | 6.1233091 | INSIDE | 1002.125 | 2.2295737 | 4.6899538 | 349 |
| 2.4197028 | 5.3506079 | INSIDE | 182.0202 | 1.8446596 | 3.5916819 | 2283 |
| 3.028988 | 8.1623694 | INSIDE | 184.7832 | 1.4420102 | 2.7169918 | 1374 |
| 1.8612074 | 3.6331159 | INSIDE | 239.5239 | 2.2624505 | 4.7980577 | 388 |
| 1.8808694 | 3.6829694 | INSIDE | 768.0961 | 2.312153 | 4.9662366 | 152 |
| 2.0473123 | 4.1333522 | INSIDE | | 2.190279 | 4.5639374 | 675 |
| 2.6680353 | 6.3556307 | INSIDE | 369.5122 | 2.520149 | 5.7364134 | 107 |
| 2.2192128 | 4.6563929 | INSIDE | 194.5683 | 1.5617547 | 2.9521268 | 747 |
| 1.9391494 | 3.8347949 | INSIDE | 491.7883 | 1.297024 | 2.4572148 | 3091 |
| 2.4804387 | 5.5806714 | INSIDE | 196.4861 | 2.0281625 | 4.0788501 | 1039 |
| 2.408512 | 5.3092644 | INSIDE | 146.2722 | 1.6248529 | 3.0841072 | 1454 |
| 2.817801 | 7.0508686 | INSIDE | 527.1342 | 1.7205334 | 3.2955823 | 1174 |
| 3.1867988 | 9.1058822 | INSIDE | 311.6694 | 1.4111937 | 2.6595713 | 197 |
| 1.985539 | 3.9601059 | INSIDE | | 1.9268812 | 3.8023233 | 213 |
| 2.4753368 | 5.5609709 | INSIDE | | 1.699116 | 3.2470194 | 486 |
| 2.3147657 | 4.9752385 | INSIDE | | 1.8921678 | 3.7119256 | 4184 |
| 2.5717266 | 5.9452052 | INSIDE | 3166.377 | 1.9164581 | 3.7749515 | 220 |
| 2.7233937 | 6.6042453 | INSIDE | 243.1206 | 2.3193772 | 4.9911671 | 231 |
| 2.9525435 | 7.7411264 | INSIDE | | 2.084415 | 4.2410309 | 289 |
| 1.9912268 | 3.9757493 | INSIDE | 334.4827 | 2.2743917 | 4.8379361 | 180 |
| 3.3878675 | 10.467663 | INSIDE | | 2.6741352 | 6.38256 | 847 |
| 2.0655549 | 4.1859495 | INSIDE | 170.1185 | 1.3698301 | 2.5844013 | 3647 |
| 2.185232 | 4.5479992 | INSIDE | 423.0923 | 1.3900356 | 2.6208515 | 2214 |
| 2.301821 | 4.9307975 | INSIDE | 263.6499 | | | |
| 1.7636384 | 3.3955338 | INSIDE | 610.1351 | 1.460811 | 2.7526306 | 783 |
| 2.2300425 | 4.691478 | INSIDE | | 1.437541 | 2.7085881 | 1983 |
| 2.5065196 | 5.6824757 | INSIDE | 970.579 | 1.5861181 | 3.002404 | 3598 |
| 2.2274835 | 4.6831638 | INSIDE | 129.283 | 2.2369792 | 4.7140897 | 633 |
| 2.068089 | 4.1933086 | INSIDE | 773.8264 | 2.0964093 | 4.276437 | 351 |
| 1.7399341 | 3.3401991 | INSIDE | | 1.4785621 | 2.7867085 | 2400 |
| 2.221052 | 4.6623328 | INSIDE | | 1.7472124 | 3.3570928 | 828 |
| 2.223963 | 4.6717498 | INSIDE | 85.11141 | 1.0198691 | 2.027735 | 5416 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.784177 | 3.4442193 | INSIDE | | 1.4654926 | 2.7615775 | 2463 |
| 2.7859783 | 6.8970446 | INSIDE | | 1.6547915 | 3.1487768 | 627 |
| 2.209249 | 4.6243449 | INSIDE | 64.19047 | 1.47982 | 2.7891393 | 1159 |
| 1.9052974 | 3.7458611 | INSIDE | 484.3774 | 1.8343551 | 3.5661196 | 1550 |
| 2.3117988 | 4.9650175 | INSIDE | 277.4359 | 1.8578132 | 3.6245784 | 2439 |
| 2.4730022 | 5.5519793 | INSIDE | | 1.997407 | 3.9928171 | 2023 |
| 2.3727357 | 5.1792231 | INSIDE | 658.8298 | 1.7994046 | 3.4807654 | 909 |
| 2.0546515 | 4.1544327 | INSIDE | 412.9338 | 1.7846016 | 3.4452331 | 982 |
| 2.4191656 | 5.3486159 | INSIDE | 178.7338 | 2.4685416 | 5.53484 | 54 |
| 2.175274 | 4.5167154 | INSIDE | 129.6524 | 1.6926628 | 3.2325279 | 641 |
| 1.6728187 | 3.1883692 | INSIDE | 136.9188 | 1.4856026 | 2.8003412 | 578 |
| 2.08624 | 4.2463992 | INSIDE | 91.56937 | 1.5451422 | 2.9183283 | 2263 |
| 2.775311 | 6.8462359 | INSIDE | | 1.8042567 | 3.4924917 | 1556 |
| 2.2829192 | 4.8666169 | INSIDE | 171.8482 | 1.7998077 | 3.4817381 | 1144 |
| 2.107639 | 4.309854 | INSIDE | 164.995 | 1.4414872 | 2.716007 | 2643 |
| 2.4318314 | 5.3957795 | INSIDE | 166.6037 | 1.6764159 | 3.196329 | 1459 |
| 1.7939395 | 3.4676048 | INSIDE | 123.5355 | 2.1443954 | 4.4210695 | 863 |
| 2.4389322 | 5.4224025 | INSIDE | 347.4851 | 1.8891443 | 3.7041546 | 249 |
| 2.4314752 | 5.3944475 | INSIDE | | 2.084725 | 4.2419423 | 520 |
| 2.043989 | 4.1238418 | INSIDE | | 2.2476065 | 4.7489432 | 2146 |
| 2.0991437 | 4.28455 | INSIDE | 280.2976 | 1.2605532 | 2.3958759 | 1292 |
| 2.3211567 | 4.9973273 | INSIDE | 231.8985 | 1.3508043 | 2.5505428 | 1588 |
| 2.5858605 | 6.0037358 | INSIDE | | 1.8337508 | 3.5646262 | 1212 |
| 2.155528 | 4.4553167 | INSIDE | | 1.759752 | 3.3863991 | 4904 |
| 2.0069482 | 4.019311 | INSIDE | 272.2134 | 1.931836 | 3.8154045 | 269 |
| 2.0938323 | 4.2688051 | INSIDE | | 1.8443022 | 3.5907923 | 707 |
| 2.5716407 | 5.9448512 | INSIDE | 719.1517 | 1.7354544 | 3.3298436 | 4244 |
| 2.0304 | 4.085181 | INSIDE | 733.639 | 1.1968027 | 2.2923109 | 494 |
| 2.0798883 | 4.2277448 | INSIDE | | 1.3283998 | 2.5112398 | 3765 |
| 2.5586658 | 5.8916258 | INSIDE | | 1.498577 | 2.8256387 | 1160 |
| 1.72061 | 3.2957573 | INSIDE | 181.3087 | 2.2349508 | 4.7074664 | 1341 |
| 2.1543746 | 4.4517562 | INSIDE | | 1.5111688 | 2.8504087 | 1146 |
| 1.9990491 | 3.9973644 | INSIDE | 639.1933 | 1.4064484 | 2.6508378 | 3079 |
| 2.2137053 | 4.638651 | INSIDE | | 1.9349359 | 3.8236114 | 646 |
| 2.195788 | 4.5813983 | INSIDE | 722.7895 | 1.8144933 | 3.5173607 | 684 |
| 2.4626877 | 5.5124272 | INSIDE | | 1.679259 | 3.2026341 | 1270 |
| 2.5697937 | 5.9372452 | INSIDE | | 2.0620193 | 4.1757036 | 286 |
| 1.9990366 | 3.9973298 | INSIDE | | 1.6368852 | 3.1099367 | 2884 |
| 2.2726483 | 4.8320933 | INSIDE | | 1.7484729 | 3.3600272 | 2332 |
| 2.476497 | 5.5654448 | INSIDE | 692.4073 | 1.8052182 | 3.4948201 | 2026 |
| 2.5021813 | 5.6654137 | INSIDE | 143.9918 | 1.8234928 | 3.5393705 | 3391 |
| 2.9120355 | 7.5267941 | INSIDE | | 2.2638676 | 4.8027729 | 1665 |
| 2.626968 | 6.177264 | INSIDE | | 2.004299 | 4.0119371 | 1796 |
| 2.5917678 | 6.0283693 | INSIDE | | 2.0345402 | 4.0969214 | 2957 |
| 2.793723 | 6.934169 | INSIDE | 143.8819 | 2.5602856 | 5.8982444 | 978 |
| 1.9768718 | 3.9363863 | INSIDE | 632.1733 | 2.1374655 | 4.399884 | 118 |
| 2.0671349 | 4.1905363 | INSIDE | | 1.6448404 | 3.1271326 | 2338 |
| 2.1724126 | 4.5077659 | INSIDE | | 2.5875568 | 6.0107991 | 160 |
| 2.5342784 | 5.7928704 | INSIDE | 303.0901 | 2.1586845 | 4.4650753 | 2180 |
| 2.4235556 | 5.3649161 | INSIDE | | 2.0536964 | 4.1516833 | 1251 |
| 2.0604773 | 4.1712428 | INSIDE | 417.2693 | 1.547163 | 2.9224189 | 1066 |
| 2.4051538 | 5.2969203 | INSIDE | 466.0934 | 1.7540689 | 3.3730855 | 1182 |
| 2.1759403 | 4.5188019 | INSIDE | 144.4429 | 1.3181865 | 2.4935247 | 2962 |
| 1.9306926 | 3.8123818 | INSIDE | 146.2673 | 1.7874346 | 3.4520051 | 1239 |
| 2.252278 | 4.7643454 | INSIDE | 191.2563 | 1.6183531 | 3.0702435 | 5053 |
| 1.9594116 | 3.8890333 | INSIDE | | 1.586066 | 3.0022955 | 2072 |
| 2.233671 | 4.7032923 | INSIDE | | 1.6398963 | 3.1164343 | 2304 |
| 1.8361222 | 3.5704903 | INSIDE | 110.0023 | 1.7085725 | 3.2683727 | 1078 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.1124008 | 4.3241027 | INSIDE | 165.4915 | 1.7455342 | 3.3531899 | 2618 |
| 2.106085 | 4.3052141 | INSIDE | 167.4689 | 1.6246179 | 3.0836048 | 1418 |
| 2.2020247 | 4.6012463 | INSIDE | 1199.886 | 2.2084231 | 4.6216983 | 187 |
| 2.5942218 | 6.0386322 | INSIDE | 265.5132 | 1.8754082 | 3.6690542 | 2503 |
| 2.4398859 | 5.4259882 | INSIDE | | 2.0009582 | 4.0026576 | 2551 |
| 1.8770357 | 3.6731955 | INSIDE | 169.0238 | 1.7229122 | 3.3010207 | 824 |
| 2.5141346 | 5.7125489 | INSIDE | 184.4141 | 2.117524 | 4.3394855 | 3792 |
| 1.9943556 | 3.984381 | INSIDE | 784.9267 | 1.3372488 | 2.5266902 | 1531 |
| 1.9226791 | 3.7912645 | INSIDE | 228.2984 | 1.993757 | 3.9827281 | 1246 |
| 2.3207796 | 4.9960212 | INSIDE | 141.4496 | 1.6702182 | 3.1826273 | 2314 |
| 2.4148078 | 5.3324843 | INSIDE | 509.279 | 1.8094907 | 3.5051853 | 2203 |
| 1.9820945 | 3.9506622 | INSIDE | 214.8001 | 1.7605764 | 3.3883347 | 2553 |
| 1.8604724 | 3.6312655 | INSIDE | 125.689 | 1.4133959 | 2.6636341 | 771 |
| 2.0427215 | 4.1202204 | INSIDE | 272.1078 | 2.6895099 | 6.4509422 | 265 |
| 2.1034374 | 4.2973206 | INSIDE | 152.5477 | 1.4435546 | 2.7199019 | 1929 |
| 2.4023063 | 5.2864759 | INSIDE | 176.1994 | 1.538035 | 2.903987 | 1532 |
| 2.0451322 | 4.1271109 | INSIDE | 242.1581 | 1.4866678 | 2.8024095 | 3634 |
| 2.5528216 | 5.8678077 | INSIDE | 207.977 | 2.584158 | 5.9966551 | 11 |
| 1.911228 | 3.7612912 | INSIDE | 1168.667 | | | |
| 2.876752 | 7.3449466 | INSIDE | | 1.3606923 | 2.5680838 | 1724 |
| 2.4607189 | 5.5049097 | INSIDE | | 1.881746 | 3.6852079 | 301 |
| 2.4135246 | 5.3277434 | INSIDE | 124.7735 | 1.8911163 | 3.7092212 | 1121 |
| 2.510322 | 5.6974723 | INSIDE | 388.6622 | 1.8765495 | 3.6719579 | 674 |
| 2.3837004 | 5.2187359 | INSIDE | 458.3983 | 1.8278325 | 3.5500332 | 225 |
| 2.686612 | 6.4379974 | INSIDE | | | | |
| 2.3121629 | 4.9662707 | INSIDE | 1578.505 | 2.0749226 | 4.2132181 | 204 |
| 2.1894944 | 4.561456 | INSIDE | 712.011 | 2.203273 | 4.6052293 | 420 |
| 2.0911736 | 4.2609455 | INSIDE | 247.8007 | 1.7109666 | 3.2738009 | 2446 |
| 2.772717 | 6.8339372 | INSIDE | 311.3307 | 1.9801055 | 3.9452193 | 3359 |
| 2.1726818 | 4.5086071 | INSIDE | | 1.3578471 | 2.5630242 | 4342 |
| 1.978255 | 3.9401621 | INSIDE | 112.3223 | 1.6312882 | 3.0978949 | 383 |
| 1.8246149 | 3.5421244 | INSIDE | | 1.557458 | 2.9433477 | 1209 |
| 2.3727016 | 5.1791007 | INSIDE | | 1.5572689 | 2.942962 | 5039 |
| 1.9478092 | 3.8578825 | INSIDE | 182.5349 | 1.9165742 | 3.7752553 | 332 |
| 2.392839 | 5.2518984 | INSIDE | 421.0205 | 1.9637117 | 3.9006423 | 447 |
| 2.7382011 | 6.6723784 | INSIDE | 229.679 | 2.1493714 | 4.4363445 | 1007 |
| 1.9586409 | 3.8869563 | INSIDE | | 1.528027 | 2.8839117 | 1519 |
| 2.204144 | 4.6080105 | INSIDE | | 1.3621266 | 2.5706382 | 2120 |
| 2.3773634 | 5.195863 | INSIDE | 124.6984 | 1.9275916 | 3.8041961 | 2054 |
| 2.5504863 | 5.8583172 | INSIDE | 149.4233 | 1.9315051 | 3.8145294 | 3507 |
| 1.8765643 | 3.6719955 | INSIDE | | 1.7583764 | 3.3831717 | 601 |
| 1.8043506 | 3.4927191 | INSIDE | | | | |
| 2.0834484 | 4.2381904 | INSIDE | 571.0599 | 1.4783494 | 2.7862977 | 2642 |
| 2.0570533 | 4.1613548 | INSIDE | | 1.7631332 | 3.394345 | 2064 |
| 2.0921123 | 4.2637188 | INSIDE | | 1.8234454 | 3.5392542 | 720 |
| 1.673892 | 3.1907421 | INSIDE | | 1.7934912 | 3.4665275 | 353 |
| 2.3335028 | 5.0402762 | INSIDE | 188.5048 | 1.4738204 | 2.7775645 | 2517 |
| 2.2216487 | 4.6642616 | INSIDE | 117.6286 | 1.3396821 | 2.5309554 | 2818 |
| 2.5835254 | 5.9940262 | INSIDE | 523.0806 | 1.2507136 | 2.379591 | 1755 |
| 2.0312667 | 4.0876359 | INSIDE | 193.6056 | | | |
| 1.7706007 | 3.4119599 | INSIDE | 198.1243 | 1.7533842 | 3.371485 | 389 |
| 2.1661286 | 4.488174 | INSIDE | 545.3147 | 1.2861992 | 2.4388469 | 2746 |
| 2.158046 | 4.4630996 | INSIDE | | 1.50638 | 2.8409629 | 3156 |
| 2.1466289 | 4.4279192 | INSIDE | 313.5471 | 1.5725213 | 2.9742405 | 3732 |
| 1.8467193 | 3.5968134 | INSIDE | | 2.1584694 | 4.4644096 | 307 |
| 2.0199497 | 4.0556965 | INSIDE | 882.243 | 2.282878 | 4.8664779 | 188 |
| 1.8571149 | 3.6228245 | INSIDE | 205.9295 | 1.9548365 | 3.8767199 | 2225 |
| 1.9908174 | 3.9746213 | INSIDE | 383.42 | 2.012341 | 4.0343633 | 1090 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.2782729 | 4.8509688 | INSIDE | | 1.8433621 | 3.5884532 | 1205 |
| 2.1141477 | 4.3293418 | INSIDE | 167.3421 | 1.9171299 | 3.7767097 | 529 |
| 2.1883912 | 4.5579693 | INSIDE | 290.6799 | 1.8204633 | 3.531946 | 1667 |
| 2.1240268 | 4.3590894 | INSIDE | 178.267 | 1.8627278 | 3.6369467 | 392 |
| 1.6809027 | 3.2062851 | INSIDE | | 1.4483312 | 2.7289221 | 3160 |
| 2.0705464 | 4.2004573 | INSIDE | 1240.499 | 1.7137706 | 3.28017 | 2776 |
| 1.9885011 | 3.968245 | INSIDE | 137.3601 | | | |
| 2.985568 | 7.9203709 | INSIDE | 690.5484 | 2.254939 | 4.7731412 | 2936 |
| 2.3719425 | 5.1763763 | INSIDE | 142.2173 | | | |
| 2.128224 | 4.3717897 | INSIDE | 98.27532 | 1.547515 | 2.923132 | 2271 |
| 1.8835703 | 3.6898708 | INSIDE | 133.1719 | 1.5030097 | 2.8343338 | 2288 |
| 2.2470145 | 4.7469949 | INSIDE | 130.1426 | 1.9245082 | 3.7960742 | 1211 |
| 2.075196 | 4.2140166 | INSIDE | 199.4873 | 1.9135579 | 3.7673704 | 3393 |
| 2.1592536 | 4.466837 | INSIDE | 1607.072 | 1.9612927 | 3.8941075 | 731 |
| 2.4424314 | 5.4355703 | INSIDE | 148.6824 | 1.744288 | 3.3502947 | 648 |
| 2.5272262 | 5.7646228 | INSIDE | 552.7131 | 2.0243404 | 4.0680584 | 2323 |
| 1.6854539 | 3.2164158 | INSIDE | 189.7815 | 1.2271308 | 2.3410095 | 2138 |
| 2.2390137 | 4.7207422 | INSIDE | 124.1791 | 2.078392 | 4.2233623 | 498 |
| 2.2403913 | 4.7252521 | INSIDE | 445.0245 | 1.6999602 | 3.24892 | 2800 |
| 2.1833358 | 4.5420255 | INSIDE | 119.9473 | 1.659177 | 3.158363 | 1829 |
| 2.1086812 | 4.3129686 | INSIDE | 227.097 | 1.9450418 | 3.8504893 | 784 |
| 2.469811 | 5.5397121 | INSIDE | 4387.774 | 2.0205026 | 4.0572511 | 774 |
| 2.1514227 | 4.4426568 | INSIDE | 272.1976 | 2.1477242 | 4.4312822 | 1142 |
| 2.440641 | 5.4288288 | INSIDE | 332.7159 | 1.6531649 | 3.1452286 | 2086 |
| 3.0274036 | 8.1534102 | INSIDE | | | | |
| 2.4583783 | 5.4959859 | INSIDE | 181.2563 | 1.1982882 | 2.2946724 | 3116 |
| 2.070277 | 4.199673 | INSIDE | 184.49 | 1.844062 | 3.5901945 | 2417 |
| 2.3737319 | 5.1828006 | INSIDE | 110.6935 | | | |
| 2.0840452 | 4.239944 | INSIDE | 138.0311 | 1.5850431 | 3.0001676 | 2296 |
| 2.5075462 | 5.6865207 | INSIDE | | 1.6912446 | 3.2293518 | 927 |
| 2.370043 | 5.1695654 | INSIDE | 315.277 | 1.8002131 | 3.4827166 | 3064 |
| 2.5532606 | 5.8695935 | INSIDE | 240.7241 | | | |
| 2.1942792 | 4.5766095 | INSIDE | | 1.7854755 | 3.4473207 | 2191 |
| 1.8305242 | 3.5566628 | INSIDE | | 1.2881125 | 2.4420834 | 3239 |
| 1.5970699 | 3.0252826 | INSIDE | | 1.0713328 | 2.1013738 | 3730 |
| 2.1929193 | 4.5722976 | INSIDE | | 1.4973048 | 2.8231481 | 3908 |
| 2.0928068 | 4.2657718 | INSIDE | 127.9155 | 1.3963087 | 2.6322722 | 2766 |
| 2.4721851 | 5.5488358 | INSIDE | 923.4659 | 1.5002722 | 2.8289608 | 2886 |
| 1.793748 | 3.4671446 | INSIDE | | 1.4277911 | 2.6903448 | 2322 |
| 1.9283851 | 3.806289 | INSIDE | | 1.6737002 | 3.1903179 | 1901 |
| 2.0111327 | 4.0309858 | INSIDE | 169.7178 | 1.7395493 | 3.3393083 | 1583 |
| 2.3520083 | 5.1053444 | INSIDE | | 1.1285677 | 2.1864157 | 3251 |
| 1.6405689 | 3.1178876 | INSIDE | 290.1361 | 1.7160751 | 3.2854138 | 1396 |
| 2.0651743 | 4.1848453 | INSIDE | | 1.63026 | 3.0956878 | 2976 |
| 2.6827867 | 6.4209497 | INSIDE | | 2.583475 | 5.9938168 | 283 |
| 2.2455583 | 4.7422059 | INSIDE | | 1.4108233 | 2.6588885 | 2873 |
| 2.0535834 | 4.1513581 | INSIDE | | 1.8629982 | 3.6376285 | 3533 |
| 2.0211542 | 4.059084 | INSIDE | 864.2783 | 1.4804145 | 2.7902889 | 1833 |
| 1.8768755 | 3.6727877 | INSIDE | | 2.2065198 | 4.6156051 | 1507 |
| 1.8689771 | 3.652735 | INSIDE | 1285.821 | 1.6222925 | 3.0786386 | 2718 |
| 2.2341933 | 4.7049954 | INSIDE | 407.0571 | 1.6221141 | 3.0782579 | 895 |
| 2.2318504 | 4.6973608 | INSIDE | 127.6055 | 2.2513864 | 4.7614019 | 1124 |
| 1.8931404 | 3.7144289 | INSIDE | 301.0237 | 1.8158962 | 3.5207827 | 2380 |
| 1.9901757 | 3.9728538 | INSIDE | 167.4585 | 1.9846083 | 3.957552 | 1899 |
| 2.438614 | 5.4212066 | INSIDE | | | | |
| 1.9255134 | 3.7987201 | INSIDE | | 1.4448156 | 2.7222803 | 1393 |
| 1.9185113 | 3.7803277 | INSIDE | 200.9917 | 1.4619792 | 2.7548604 | 2753 |
| 2.2667809 | 4.8124812 | INSIDE | 671.1576 | 1.8698092 | 3.6548424 | 2147 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.210368 | 4.6279331 | INSIDE | 109.6214 | 1.7314698 | 3.3206595 | 2032 |
| 1.989217 | 3.9702146 | INSIDE | 730.7988 | 1.5223051 | 2.8724964 | 538 |
| 1.8035759 | 3.490844 | INSIDE | 691.5104 | 1.4001153 | 2.6392267 | 1927 |
| 1.8393581 | 3.5785077 | INSIDE | 433.7361 | 1.8532636 | 3.6131662 | 1231 |
| 2.146466 | 4.4274193 | INSIDE | 162.0919 | 1.7218312 | 3.2985482 | 858 |
| 1.9302267 | 3.8111508 | INSIDE | | 1.6950552 | 3.2378928 | 1638 |
| 1.612327 | 3.057446 | INSIDE | 254.3369 | 1.4300053 | 2.6944771 | 2373 |
| 1.7637985 | 3.3959106 | INSIDE | 2979.846 | 1.4090196 | 2.6555664 | 1850 |
| 1.6910515 | 3.2289196 | INSIDE | | 1.3521467 | 2.5529171 | 5583 |
| 2.0323668 | 4.090754 | INSIDE | 137.5924 | 1.762855 | 3.3936905 | 711 |
| 1.7325892 | 3.323237 | INSIDE | 1877.345 | 2.1848865 | 4.5469102 | 97 |
| 2.0796027 | 4.226908 | INSIDE | 209.5804 | 2.1366403 | 4.3973681 | 1050 |
| 2.3674147 | 5.1601561 | INSIDE | 1459.399 | 1.4674946 | 2.7654123 | 5149 |
| 2.3527193 | 5.1078611 | INSIDE | | 2.354897 | 5.1155771 | 44 |
| 2.3279665 | 5.0209714 | INSIDE | 112.4486 | 1.7315722 | 3.3208952 | 4457 |
| 2.1961343 | 4.5824982 | INSIDE | 65.76645 | 2.3121822 | 4.9663371 | 544 |
| 1.9737885 | 3.9279825 | INSIDE | 157.989 | 1.338974 | 2.5297135 | 4680 |
| 2.5873406 | 6.0098984 | INSIDE | 591.605 | 2.5831716 | 5.9925565 | 226 |
| 2.4503896 | 5.4656368 | INSIDE | | 1.9400733 | 3.8372514 | 2780 |
| 1.7927364 | 3.4647143 | INSIDE | 254.0923 | 1.573722 | 2.9767169 | 1946 |
| 2.7941232 | 6.9360928 | INSIDE | | 2.2408316 | 4.7266944 | 1526 |
| 2.4693272 | 5.5378547 | INSIDE | 125.9002 | 1.9941831 | 3.9839046 | 2661 |
| 2.4710922 | 5.5446339 | INSIDE | 598.233 | 1.5522105 | 2.9326614 | 151 |
| 1.6546096 | 3.1483798 | INSIDE | 152.9174 | 1.162722 | 2.2387943 | 3375 |
| 2.1154342 | 4.3332041 | INSIDE | 156.2063 | 1.8501804 | 3.6054527 | 2926 |
| 1.6295438 | 3.0941514 | INSIDE | 1007.945 | 1.6627225 | 3.1661344 | 2591 |
| 1.8462497 | 3.5956428 | INSIDE | | | | |
| 2.0661187 | 4.1875857 | INSIDE | | 1.853819 | 3.6145574 | 1799 |
| 2.0882354 | 4.2522765 | INSIDE | 196.7813 | | | |
| 1.898205 | 3.7274913 | INSIDE | | 2.006313 | 4.0175417 | 3004 |
| 2.1617455 | 4.474559 | INSIDE | | 1.8221806 | 3.5361528 | 1761 |
| 1.8394396 | 3.5787099 | INSIDE | 1610.714 | 1.8367785 | 3.5721149 | 2365 |
| 1.9268385 | 3.8022107 | INSIDE | 213.7794 | | | |
| 2.559145 | 5.8935831 | INSIDE | 848.5114 | 1.3109308 | 2.4810156 | 3722 |
| 1.8090531 | 3.5041222 | INSIDE | | 1.9577155 | 3.8844639 | 691 |
| 2.039538 | 4.1111386 | INSIDE | | 1.6794502 | 3.2030586 | 3582 |
| 2.2839508 | 4.870098 | INSIDE | 1139.54 | 2.1306424 | 4.3791243 | 1726 |
| 2.4039278 | 5.2924209 | INSIDE | 202.1522 | 1.7362493 | 3.3316788 | 823 |
| 1.7600229 | 3.387035 | INSIDE | | 1.4093013 | 2.656085 | 4491 |
| 1.8816638 | 3.6849979 | INSIDE | 460.1884 | 1.4185482 | 2.6731637 | 3044 |
| 2.3884172 | 5.2358262 | INSIDE | 421.7219 | 1.683248 | 3.2115016 | 1517 |
| 2.395573 | 5.2618605 | INSIDE | 1388.453 | | | |
| 2.458227 | 5.4954095 | INSIDE | 1004.281 | 1.7708186 | 3.4124753 | 563 |
| 1.934601 | 3.8227239 | INSIDE | | 1.6178546 | 3.0691829 | 5252 |
| 1.8574929 | 3.6237738 | INSIDE | | 2.0914965 | 4.2618993 | 1928 |
| 2.0822945 | 4.2348019 | INSIDE | 594.4813 | 1.7030195 | 3.2558167 | 810 |
| 2.2270627 | 4.681798 | INSIDE | 1372.753 | 1.5796628 | 2.9889998 | 5306 |
| 2.3786736 | 5.2005839 | INSIDE | | 1.4676538 | 2.7657175 | 1898 |
| 1.777759 | 3.4289313 | INSIDE | 152.9968 | 1.4057746 | 2.6496 | 2697 |
| 2.1504776 | 4.4397474 | INSIDE | 164.8839 | 1.8273116 | 3.5487516 | 3956 |
| 2.1841936 | 4.5447269 | INSIDE | | 1.9153179 | 3.7719692 | 4913 |
| 2.0448325 | 4.1262536 | INSIDE | | 1.6760762 | 3.1955764 | 1858 |
| 1.7822987 | 3.439738 | INSIDE | 130.1641 | 1.4232676 | 2.6819226 | 3948 |
| 1.8701305 | 3.6556565 | INSIDE | 118.4413 | 1.6261356 | 3.0868505 | 2458 |
| 2.2056704 | 4.6128884 | INSIDE | | 1.2454132 | 2.3708645 | 1845 |
| 1.768073 | 3.4059872 | INSIDE | 120.6753 | 1.5998377 | 3.0310921 | 373 |
| 2.2569559 | 4.7798187 | INSIDE | 81.92689 | 1.9207608 | 3.7862267 | 588 |
| 2.1731904 | 4.5101968 | INSIDE | 701.0256 | 1.2802669 | 2.4288391 | 1006 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.7418303 | 6.6891843 | INSIDE | 285.0641 | 2.3061368 | 4.94557 | 1804 |
| 2.9845092 | 7.9145603 | INSIDE | 152.0555 | 1.2771642 | 2.4236211 | 3530 |
| 2.376256 | 5.1918763 | INSIDE | 221.9313 | 1.9243374 | 3.7956248 | 866 |
| 2.1115732 | 4.3216229 | INSIDE | 602.3559 | 1.7099364 | 3.271464 | 394 |
| 2.012173 | 4.0338935 | INSIDE | | 1.7911205 | 3.4608358 | 2215 |
| 1.8908973 | 3.7086582 | INSIDE | 141.5529 | 1.3617021 | 2.569882 | 1640 |
| 2.0090103 | 4.02506 | INSIDE | 481.1596 | 1.4158952 | 2.6682525 | 1019 |
| 2.453582 | 5.4777446 | INSIDE | | 1.8248353 | 3.5426656 | 4550 |
| 2.009387 | 4.0261111 | INSIDE | | 1.3175505 | 2.4924257 | 3511 |
| 2.397345 | 5.2683274 | INSIDE | | 1.7191932 | 3.2925223 | 2587 |
| 2.4002235 | 5.2788494 | INSIDE | | 1.6869015 | 3.2196447 | 2945 |
| 2.45373 | 5.4783066 | INSIDE | | | | |
| 2.1858952 | 4.5500904 | INSIDE | 142.43 | 1.6019658 | 3.0355665 | 1201 |
| 2.0589776 | 4.166909 | INSIDE | | 1.6567494 | 3.153053 | 2882 |
| 2.4917276 | 5.6245107 | INSIDE | 104.266 | 2.3462937 | 5.0851619 | 1371 |
| 1.6368203 | 3.1097968 | INSIDE | 701.3575 | 1.5057576 | 2.8397375 | 2399 |
| 1.6548643 | 3.1489357 | INSIDE | 159.0191 | | | |
| 1.7791009 | 3.4321222 | INSIDE | 319.5077 | 1.9409398 | 3.8395568 | 2511 |
| 2.2588167 | 4.7859877 | INSIDE | 2912.286 | 1.6418308 | 3.1206159 | 589 |
| 1.9035461 | 3.7413167 | INSIDE | | 1.5772438 | 2.9839923 | 2624 |
| 2.430279 | 5.3899766 | INSIDE | 638.123 | 1.7669659 | 3.4033745 | 241 |
| 2.4541075 | 5.4797402 | INSIDE | | | | |
| 2.447306 | 5.4539671 | INSIDE | 158.1844 | 1.0963988 | 2.138203 | 4598 |
| 2.1066618 | 4.3069357 | INSIDE | | 1.2389197 | 2.3602173 | 5437 |
| 1.9107355 | 3.7600074 | INSIDE | 122.1442 | 1.6518922 | 3.1424552 | 845 |
| 2.2915528 | 4.8958277 | INSIDE | 138.6192 | 1.1289269 | 2.1869601 | 5356 |
| 1.7211196 | 3.2969216 | INSIDE | 235.2921 | 1.4722805 | 2.7746013 | 692 |
| 1.9321479 | 3.8162294 | INSIDE | 583.9292 | 1.6631693 | 3.1671151 | 1870 |
| 1.9100791 | 3.7582971 | INSIDE | 1219.201 | 1.9352534 | 3.824453 | 657 |
| 2.910894 | 7.520841 | INSIDE | | 2.0003107 | 4.0008615 | 2794 |
| 1.9975885 | 3.9933195 | INSIDE | 303.2093 | 1.9451027 | 3.8506519 | 2125 |
| 2.1861658 | 4.5509439 | INSIDE | 1742.264 | 1.837009 | 3.5726857 | 1148 |
| 2.050461 | 4.1423831 | INSIDE | 227.4205 | 1.4595286 | 2.7501849 | 1309 |
| 2.6986253 | 6.4918304 | INSIDE | | 2.1564212 | 4.458076 | 3614 |
| 2.2505376 | 4.7586014 | INSIDE | | 1.605379 | 3.0427567 | 3332 |
| 3.500966 | 11.321286 | INSIDE | 621.0236 | 2.7219076 | 6.5974458 | 561 |
| 2.0286016 | 4.0800918 | INSIDE | 229.0647 | 1.3458482 | 2.5417959 | 2053 |
| 2.2383254 | 4.7184905 | INSIDE | 915.2507 | 1.5473145 | 2.9227258 | 4706 |
| 2.0690737 | 4.1961717 | INSIDE | 282.4068 | 1.5923069 | 3.0153112 | 4788 |
| 2.0562034 | 4.158904 | INSIDE | 299.7747 | | | |
| 2.325388 | 5.0120055 | INSIDE | | 2.0490987 | 4.1384734 | 1157 |
| 1.9799756 | 3.9448641 | INSIDE | | 1.4517678 | 2.7354303 | 4152 |
| 1.8505881 | 3.6064717 | INSIDE | 1189.601 | 1.558736 | 2.9459562 | 743 |
| 1.743193 | 3.3477528 | INSIDE | | 1.7141398 | 3.2810096 | 950 |
| 1.9111425 | 3.7610683 | INSIDE | 457.1897 | 1.451353 | 2.7346439 | 1586 |
| 2.2601705 | 4.7904809 | INSIDE | 375.4656 | 1.5270799 | 2.8820191 | 2589 |
| 1.8656284 | 3.6442663 | INSIDE | 1382.266 | 1.6732917 | 3.1894147 | 391 |
| 1.8392049 | 3.5781278 | INSIDE | 1386.274 | 1.6635691 | 3.1679929 | 1584 |
| 2.1110528 | 4.3200643 | INSIDE | 107.5819 | | | |
| 2.137539 | 4.4001082 | INSIDE | 104.4543 | 2.1643267 | 4.4825718 | 3510 |
| 2.5165167 | 5.7219889 | INSIDE | 172.5909 | 1.5825621 | 2.9950127 | 4080 |
| 1.8338512 | 3.5648743 | INSIDE | 240.8713 | 2.1904175 | 4.5643756 | 395 |
| 1.6130723 | 3.0590259 | INSIDE | 284.9974 | 1.4826607 | 2.7946366 | 1207 |
| 1.7113237 | 3.2746114 | INSIDE | 217.1827 | 1.672593 | 3.1878704 | 1308 |
| 1.6611392 | 3.1626616 | INSIDE | 246.5857 | | | |
| 2.1380658 | 4.4017152 | INSIDE | | 1.8611377 | 3.6329404 | 4429 |
| 2.2962942 | 4.9119443 | INSIDE | 5109.38 | 2.2014732 | 4.5994878 | 147 |
| 1.6079646 | 3.0482149 | INSIDE | 598.8149 | 1.4369891 | 2.7075521 | 1261 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.1072578 | 4.3087154 | INSIDE | 135.1942 | 1.4479718 | 2.7282423 | 1267 |
| 2.5629702 | 5.9092302 | INSIDE | 2412.541 | 1.809819 | 3.505983 | 792 |
| 2.2861145 | 4.8774075 | INSIDE | 1471.506 | 2.2652879 | 4.8075035 | 1703 |
| 2.0721369 | 4.2050906 | INSIDE | 221.2972 | 1.8091636 | 3.5043906 | 2731 |
| 1.9672248 | 3.9101523 | INSIDE | 401.9295 | 1.8821412 | 3.6862175 | 3041 |
| 2.0436678 | 4.1229238 | INSIDE | 358.3913 | 2.0296483 | 4.083053 | 376 |
| 2.0227492 | 4.0635741 | INSIDE | 178.4209 | 1.4509314 | 2.7338449 | 1469 |
| 1.714152 | 3.2810373 | INSIDE | 256.8859 | 1.2925341 | 2.4495795 | 3426 |
| 2.0573113 | 4.1620991 | INSIDE | 167.052 | 1.6230373 | 3.0802283 | 971 |
| 1.9630086 | 3.8987418 | INSIDE | | 1.5579665 | 2.9443854 | 2982 |
| 2.0077906 | 4.0216586 | INSIDE | 189.2502 | | | |
| 2.0049806 | 4.013833 | INSIDE | 113.8236 | 1.8665519 | 3.6465999 | 4030 |
| 1.6308427 | 3.0969384 | INSIDE | | 1.3303916 | 2.5147092 | 5490 |
| 1.9636151 | 3.9003811 | INSIDE | 147.1695 | 1.6922262 | 3.2315497 | 182 |
| 2.3875856 | 5.232809 | INSIDE | 159.34 | 1.7723001 | 3.4159814 | 1735 |
| 2.290787 | 4.8932297 | INSIDE | | 1.7921851 | 3.4633906 | 2965 |
| 1.7919959 | 3.4629364 | INSIDE | | 1.9644647 | 3.9026787 | 1593 |
| 2.4441843 | 5.4421786 | INSIDE | 1586.311 | | | |
| 2.406736 | 5.3027326 | INSIDE | 109.4401 | 1.618027 | 3.0695496 | 4189 |
| 2.0538433 | 4.1521061 | INSIDE | | 1.3341509 | 2.5212705 | 1976 |
| 2.1813653 | 4.535826 | INSIDE | 1576.65 | 1.5632446 | 2.9551771 | 2477 |
| 1.6201502 | 3.0740704 | INSIDE | 134.7203 | 1.6158732 | 3.0649705 | 1621 |
| 1.8022598 | 3.487661 | INSIDE | 1075.283 | | | |
| 1.9093935 | 3.7565115 | INSIDE | 312.9607 | | | |
| 2.1814058 | 4.5359533 | INSIDE | | | | |
| 1.7418 | 3.3445219 | INSIDE | 153.828 | | | |
| 2.8810503 | 7.3668624 | INSIDE | | 1.6863095 | 3.2183238 | 4038 |
| 2.135145 | 4.3928127 | INSIDE | 227.084 | 1.5823809 | 2.9946365 | 3368 |
| 1.6270512 | 3.0888101 | INSIDE | 1144.016 | 1.5510637 | 2.9303311 | 816 |
| 2.551656 | 5.8630689 | INSIDE | 281.5546 | 1.7578413 | 3.3819171 | 3971 |
| 1.9925634 | 3.9794344 | INSIDE | 264.2571 | 2.0720553 | 4.2048528 | 1405 |
| 1.855987 | 3.6199932 | INSIDE | | | | |
| 2.056027 | 4.1583956 | INSIDE | 198.7097 | 1.6030527 | 3.0378543 | 1736 |
| 2.3673458 | 5.1599096 | INSIDE | 1733.646 | 2.0060751 | 4.0168793 | 1312 |
| 1.832019 | 3.5603498 | INSIDE | 765.7555 | 1.4214642 | 2.6785722 | 4088 |
| 1.9878975 | 3.9665851 | INSIDE | 161.3041 | | | |
| 2.265206 | 4.8072306 | INSIDE | | 1.2726252 | 2.4160079 | 4073 |
| 1.8904998 | 3.7076365 | INSIDE | 662.0906 | 1.9690499 | 3.915102 | 138 |
| 2.6319206 | 6.1985063 | INSIDE | 1149.458 | 2.3872025 | 5.2314196 | 201 |
| 2.486824 | 5.6054259 | INSIDE | 2604.21 | 1.7586411 | 3.3837925 | 1944 |
| 1.817576 | 3.5248845 | INSIDE | | 1.3999164 | 2.6388629 | 2721 |
| 1.662991 | 3.1667237 | INSIDE | 198.2827 | 1.5307918 | 2.8894438 | 763 |
| 2.1891248 | 4.5602876 | INSIDE | | 1.7993305 | 3.4805867 | 5553 |
| 2.375782 | 5.1901707 | INSIDE | | 1.9124386 | 3.7644487 | 1730 |
| 1.9518875 | 3.8688036 | INSIDE | | | | |
| 1.9096594 | 3.7572039 | INSIDE | 415.7237 | 1.9007456 | 3.7340613 | 1488 |
| 1.7780238 | 3.4295607 | INSIDE | 532.393 | 1.2418519 | 2.3650192 | 5488 |
| 1.7949364 | 3.4700018 | INSIDE | 225.8578 | 1.828006 | 3.5504601 | 167 |
| 2.377895 | 5.1977779 | INSIDE | 1060.592 | 2.7961192 | 6.9456957 | 32 |
| 2.0615914 | 4.1744653 | INSIDE | | | | |
| 2.2966616 | 4.9131953 | INSIDE | 1350.177 | 1.7003417 | 3.2497792 | 4704 |
| 2.2486296 | 4.7523121 | INSIDE | 641.6601 | 1.9089124 | 3.755259 | 1234 |
| 1.6776204 | 3.1989987 | INSIDE | | 1.4697598 | 2.7697577 | 5133 |
| 1.9658931 | 3.9065446 | INSIDE | 231.8215 | 1.0289881 | 2.0405925 | 3758 |
| 1.997765 | 3.9938081 | INSIDE | 235.5584 | 1.2404469 | 2.3627171 | 5280 |
| 2.3174615 | 4.9845439 | INSIDE | | 1.4828347 | 2.7949737 | 4707 |
| 1.6645298 | 3.1701032 | INSIDE | 276.8564 | 1.6417198 | 3.1203758 | 1938 |
| 2.1628017 | 4.477836 | INSIDE | 528.351 | 2.0608213 | 4.1722375 | 614 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.9635094 | 3.9000954 | INSIDE | 360.0823 | 1.6544755 | 3.1480872 | 1857 |
| 1.8256518 | 3.5446712 | INSIDE | 340.476 | | | |
| 1.7108598 | 3.2735586 | INSIDE | 99.69802 | | | |
| 2.1745281 | 4.5143807 | INSIDE | 195.0561 | 1.4329389 | 2.6999616 | 1104 |
| 1.7257812 | 3.3075918 | INSIDE | | 1.7308847 | 3.3193131 | 1479 |
| 2.5868006 | 6.0076493 | INSIDE | | 2.3012373 | 4.9288029 | 654 |
| 2.4587188 | 5.4972832 | INSIDE | 122.0674 | 1.4680332 | 2.7664449 | 1533 |
| 1.8685336 | 3.6516123 | INSIDE | | 1.4495113 | 2.7311552 | 2198 |
| 2.2102656 | 4.6276046 | INSIDE | | 1.2416877 | 2.36475 | 3429 |
| 1.7024304 | 3.2544876 | INSIDE | | 1.2739968 | 2.418306 | 2938 |
| 2.041819 | 4.1176437 | INSIDE | 167.4206 | 1.7995754 | 3.4811776 | 722 |
| 2.4918973 | 5.6251724 | INSIDE | 614.3368 | | | |
| 3.2335513 | 9.4058042 | INSIDE | 367.0393 | 2.182392 | 4.5390551 | 4528 |
| 1.6689682 | 3.1798709 | INSIDE | 148.1381 | 1.5518647 | 2.9319585 | 2300 |
| 2.2561023 | 4.7769915 | INSIDE | 141.4222 | 2.5480146 | 5.848289 | 4404 |
| 2.285812 | 4.8763849 | INSIDE | 123.258 | 1.4104297 | 2.6581632 | 5019 |
| 2.2806258 | 4.8588867 | INSIDE | | 1.409163 | 2.6558304 | 4094 |
| 2.0981016 | 4.2814563 | INSIDE | | | | |
| 2.230995 | 4.6945764 | INSIDE | 244.243 | 2.041831 | 4.117678 | 710 |
| 1.9871949 | 3.9646538 | INSIDE | 165.1578 | 1.8817328 | 3.6851742 | 1716 |
| 2.41205 | 5.3223006 | INSIDE | 111.9716 | | | |
| 1.8714075 | 3.6588937 | INSIDE | 132.0916 | 1.8009678 | 3.484539 | 4992 |
| 1.8802998 | 3.6815156 | INSIDE | 492.186 | 1.7227019 | 3.3005396 | 4690 |
| 2.2196841 | 4.6579143 | INSIDE | 339.4189 | 2.0452697 | 4.1275042 | 1793 |
| 1.6920954 | 3.2312568 | INSIDE | 134.7012 | 1.4565349 | 2.7444839 | 1757 |
| 2.0661838 | 4.1877746 | INSIDE | 460.7122 | | | |
| 2.1111655 | 4.3204018 | INSIDE | 137.7458 | 1.6600883 | 3.1603587 | 3808 |
| 2.221476 | 4.6637033 | INSIDE | 356.6858 | 1.7105967 | 3.2729617 | 481 |
| 1.8039514 | 3.4917527 | INSIDE | 180.6135 | | | |
| 2.7071412 | 6.5302635 | INSIDE | | 2.2155144 | 4.6444714 | 5247 |
| 2.0364606 | 4.1023785 | INSIDE | 258.5777 | 1.5346535 | 2.8971884 | 2006 |
| 2.0642953 | 4.1822964 | INSIDE | | 2.0045373 | 4.0125999 | 1038 |
| 1.8107126 | 3.5081553 | INSIDE | 494.5312 | 1.6644017 | 3.1698217 | 5258 |
| 2.2372768 | 4.7150622 | INSIDE | 529.2032 | 1.3567777 | 2.5611251 | 2951 |
| 1.9320061 | 3.8158543 | INSIDE | | 1.8329017 | 3.5625289 | 2696 |
| 1.8587837 | 3.6270175 | INSIDE | | 1.5476646 | 2.9234352 | 1832 |
| 1.6754515 | 3.194193 | INSIDE | | 1.855507 | 3.618789 | 3238 |
| 1.8289956 | 3.5528963 | INSIDE | | 1.7689371 | 3.4080278 | 811 |
| 1.7085471 | 3.2683151 | INSIDE | 204.069 | 1.2454023 | 2.3708466 | 3316 |
| 1.5945159 | 3.0199317 | INSIDE | 157.3345 | 2.1153967 | 4.3330915 | 3738 |
| 2.190481 | 4.5645765 | INSIDE | 161.6137 | 1.4233019 | 2.6819864 | 4582 |
| 2.4605322 | 5.5041974 | INSIDE | 491.1941 | 2.0234115 | 4.06544 | 43 |
| 1.7544245 | 3.373917 | INSIDE | | | | |
| 2.0948722 | 4.2718832 | INSIDE | 445.2722 | 2.0171292 | 4.0477753 | 820 |
| 1.825166 | 3.5434778 | INSIDE | | 1.5042772 | 2.8368251 | 4435 |
| 1.6431049 | 3.1233731 | INSIDE | | 1.635613 | 3.1071955 | 5497 |
| 2.3050435 | 4.9418236 | INSIDE | | 1.7102783 | 3.2722394 | 4923 |
| 1.7650217 | 3.3987911 | INSIDE | | 1.4280496 | 2.6908269 | 2281 |
| 1.8616427 | 3.6342123 | INSIDE | 1284.036 | 1.6657163 | 3.1727114 | 1697 |
| 1.59829 | 3.0278422 | INSIDE | 670.5199 | 1.718466 | 3.2908631 | 1263 |
| 1.9089674 | 3.7554021 | INSIDE | | 1.5134461 | 2.8549117 | 2899 |
| 2.094506 | 4.270799 | INSIDE | 205.4377 | 1.6186458 | 3.0708665 | 3538 |
| 2.1213636 | 4.35105 | INSIDE | | 1.4751436 | 2.7801131 | 5461 |
| 2.049435 | 4.1394383 | INSIDE | 605.1424 | 1.8750905 | 3.6682463 | 414 |
| 2.2831314 | 4.8673327 | INSIDE | 160.5593 | 2.5377662 | 5.806892 | 2036 |
| 2.0286796 | 4.0803124 | INSIDE | | 1.7908854 | 3.4602719 | 1172 |
| 2.1382937 | 4.4024106 | INSIDE | 111.0506 | 1.9032733 | 3.7406093 | 1252 |
| 1.9710017 | 3.9204023 | INSIDE | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.3702176 | 5.1701911 | INSIDE | | 1.6074286 | 3.0470826 | 4569 |
| 2.6087508 | 6.0997529 | INSIDE | 150.8428 | | | |
| 2.670351 | 6.3658405 | INSIDE | 162.9456 | 1.1960222 | 2.2910711 | 5018 |
| 1.707011 | 3.2648371 | INSIDE | 185.5626 | 1.3897786 | 2.6203846 | 3635 |
| 1.707022 | 3.264862 | INSIDE | | 1.4518801 | 2.7356432 | 3627 |
| 2.2982442 | 4.918588 | INSIDE | 990.1385 | 2.0053844 | 4.0149566 | 630 |
| 1.8670772 | 3.6479279 | INSIDE | 140.063 | | | |
| 1.5911664 | 3.0129284 | INSIDE | 228.6656 | 2.0666947 | 4.1892579 | 50 |
| 2.0115418 | 4.032129 | INSIDE | 169.411 | | | |
| 1.7273335 | 3.3111526 | INSIDE | 162.4772 | 1.3775835 | 2.5983279 | 2274 |
| 2.3785224 | 5.2000388 | INSIDE | 306.709 | 1.5405514 | 2.9090567 | 2212 |
| 1.6251583 | 3.0847601 | INSIDE | | 1.9222951 | 3.7902555 | 1011 |
| 2.458705 | 5.4972306 | INSIDE | 358.0562 | 2.4267154 | 5.3766792 | 732 |
| 2.648813 | 6.2715107 | INSIDE | 130.5323 | 1.2169561 | 2.3245575 | 2123 |
| 2.6696794 | 6.3628777 | INSIDE | 160.3699 | 1.6610583 | 3.1624843 | 794 |
| 1.8770573 | 3.6732505 | INSIDE | | 1.648627 | 3.1353511 | 4139 |
| 2.3233986 | 5.005099 | INSIDE | | 1.6357378 | 3.1074643 | 1370 |
| 2.8799043 | 7.3610129 | INSIDE | 460.5432 | 2.1611984 | 4.4728625 | 2888 |
| 1.8047177 | 3.4936079 | INSIDE | 208.6709 | | | |
| 1.8499573 | 3.6048952 | INSIDE | 1006.765 | 1.8656842 | 3.6444073 | 1559 |
| 1.7580549 | 3.3824179 | INSIDE | | 1.5689131 | 2.9668112 | 5153 |
| 1.604605 | 3.0411248 | INSIDE | 259.7194 | 2.1085508 | 4.3125787 | 2090 |
| 1.925177 | 3.7978344 | INSIDE | | 1.6963859 | 3.2408807 | 1237 |
| 2.2476716 | 4.7491575 | INSIDE | 503.5141 | 1.421786 | 2.6791698 | 4154 |
| 2.1064394 | 4.3062719 | INSIDE | 219.4057 | 1.9891231 | 3.9699562 | 1222 |
| 1.8749218 | 3.6678174 | INSIDE | 152.0086 | 2.07237 | 4.2057701 | 1300 |
| 1.7852706 | 3.4468311 | INSIDE | 223.5523 | | | |
| 1.6794238 | 3.203 | INSIDE | 585.3769 | 1.3424902 | 2.5358865 | 5338 |
| 1.8561738 | 3.620462 | INSIDE | 102.2358 | 2.0400317 | 4.1125457 | 2440 |
| 1.8212541 | 3.5338826 | INSIDE | 506.1591 | 1.5165522 | 2.8610649 | 1415 |
| 2.0598226 | 4.1693503 | INSIDE | | 1.924564 | 3.796221 | 2462 |
| 1.68724 | 3.2204002 | INSIDE | | 1.9023422 | 3.738196 | 417 |
| 1.6669954 | 3.1755256 | INSIDE | 151.3637 | 1.5372019 | 2.9023106 | 3968 |
| 2.102575 | 4.2947525 | INSIDE | | 1.6885642 | 3.2233575 | 5357 |
| 2.1947913 | 4.5782343 | INSIDE | 149.2207 | 1.8640085 | 3.6401767 | 366 |
| 2.0437086 | 4.1230404 | INSIDE | 138.9123 | 1.1420795 | 2.2069891 | 3551 |
| 2.0801423 | 4.2284892 | INSIDE | 1215.954 | 2.1357715 | 4.3947208 | 2375 |
| 2.0655556 | 4.1859515 | INSIDE | | 1.6561717 | 3.1517906 | 718 |
| 2.3515813 | 5.1038336 | INSIDE | 225.0372 | | | |
| 1.9741199 | 3.9288849 | INSIDE | | 1.6842141 | 3.2136529 | 3036 |
| 2.3163006 | 4.9805346 | INSIDE | | 1.6202816 | 3.0743504 | 2186 |
| 1.8591393 | 3.6279116 | INSIDE | 148.0294 | 1.4078002 | 2.6533228 | 4627 |
| 1.6168541 | 3.0670551 | INSIDE | 143.7429 | 1.4269826 | 2.6888376 | 997 |
| 2.0052907 | 4.0146959 | INSIDE | 191.748 | 1.6343507 | 3.104478 | 3830 |
| 2.6801927 | 6.4094151 | INSIDE | 104.3269 | 1.1647909 | 2.2420072 | 3028 |
| 2.560257 | 5.8981275 | INSIDE | 368.1257 | 1.633387 | 3.1024049 | 3990 |
| 1.9373981 | 3.8301426 | INSIDE | 178.712 | 1.9451602 | 3.8508054 | 355 |
| 1.751091 | 3.3661302 | INSIDE | 138.3773 | 1.5873121 | 3.0048898 | 2115 |
| 2.2432926 | 4.7347643 | INSIDE | 1589.305 | 1.7273674 | 3.3112304 | 1458 |
| 2.0593433 | 4.1679654 | INSIDE | 240.51 | 1.5460453 | 2.9201557 | 1180 |
| 2.228193 | 4.6854675 | INSIDE | | | | |
| 2.2396877 | 4.7229482 | INSIDE | 367.7047 | 1.3956901 | 2.6311438 | 1063 |
| 1.6258079 | 3.0861494 | INSIDE | | 1.0888844 | 2.1270949 | 1790 |
| 1.803113 | 3.4897241 | INSIDE | 432.0766 | 1.9387378 | 3.8337009 | 1791 |
| 2.1534765 | 4.4489858 | INSIDE | | | | |
| 2.1153584 | 4.3329765 | INSIDE | 142.2499 | | | |
| 2.1491008 | 4.4355125 | INSIDE | | 1.5563154 | 2.9410176 | 5536 |
| 1.9926265 | 3.9796085 | INSIDE | 2410.226 | 2.4123018 | 5.3232296 | 319 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.2913663 | 4.8951949 | INSIDE | 112.6198 | 1.704442 | 3.2590286 | 989 |
| 1.9878213 | 3.9663756 | INSIDE | | 1.3031955 | 2.4677487 | 5263 |
| 2.6675043 | 6.3532919 | INSIDE | | 2.067478 | 4.191533 | 4120 |
| 2.2224503 | 4.6668539 | INSIDE | 2348.839 | 1.8788619 | 3.6778481 | 2997 |
| 2.1663888 | 4.4889835 | INSIDE | 190.356 | 1.7983297 | 3.478173 | 3270 |
| 2.7338161 | 6.6521288 | INSIDE | 283.914 | | | |
| 1.7541777 | 3.3733399 | INSIDE | 140.5875 | 1.5789559 | 2.9875356 | 2678 |
| 1.8158194 | 3.5205953 | INSIDE | 234.7074 | 1.6409799 | 3.1187759 | 1967 |
| 1.7070532 | 3.2649326 | INSIDE | | 1.0963402 | 2.1381161 | 580 |
| 1.9933312 | 3.9815528 | INSIDE | 1146.003 | 1.5094641 | 2.8470426 | 5124 |
| 1.7925454 | 3.4642557 | INSIDE | | 1.2906721 | 2.44642 | 5216 |
| 2.5510168 | 5.8604717 | INSIDE | 1073.399 | 2.2808099 | 4.8595068 | 1091 |
| 2.1365397 | 4.3970615 | INSIDE | 213.7717 | 1.9672107 | 3.9101141 | 1326 |
| 2.3348505 | 5.0449868 | INSIDE | 1830.017 | 1.8743527 | 3.6663708 | 288 |
| 2.4609559 | 5.5058141 | INSIDE | 626.4592 | 1.6745119 | 3.1921134 | 3309 |
| 1.5880461 | 3.006419 | INSIDE | 1341.14 | 1.4105557 | 2.6583954 | 1527 |
| 1.9911331 | 3.9754911 | INSIDE | 115.1319 | | | |
| 1.9151881 | 3.7716299 | INSIDE | | | | |
| 2.1615858 | 4.4740637 | INSIDE | | 1.9352812 | 3.8245266 | 5395 |
| 2.1287878 | 4.3734985 | INSIDE | | 1.9358317 | 3.8259863 | 142 |
| 1.9277647 | 3.8046525 | INSIDE | | 1.6362401 | 3.1085464 | 4216 |
| 1.9697367 | 3.9169663 | INSIDE | 561.0519 | | | |
| 2.3439343 | 5.0768523 | INSIDE | | | | |
| 1.8020543 | 3.4871642 | INSIDE | 324.0102 | 1.698673 | 3.2460225 | 1776 |
| 2.0139894 | 4.0389755 | INSIDE | 332.4879 | | | |
| 2.108084 | 4.3111836 | INSIDE | 128.3496 | 1.7453879 | 3.3528499 | 2616 |
| 2.377703 | 5.1970862 | INSIDE | | 2.076248 | 4.2170906 | 4135 |
| 2.024534 | 4.0686044 | INSIDE | 130.0281 | 1.4831177 | 2.795522 | 4988 |
| 1.9063998 | 3.7487245 | INSIDE | 593.7841 | 2.6296394 | 6.1887129 | 650 |
| 2.0429618 | 4.1209067 | INSIDE | | 1.9145389 | 3.769933 | 3794 |
| 1.9526397 | 3.8708213 | INSIDE | 1044.739 | 1.43181 | 2.6978497 | 5308 |
| 1.7186937 | 3.2913825 | INSIDE | 435.9021 | 1.8100343 | 3.5065063 | 1153 |
| 1.9198709 | 3.783892 | INSIDE | | 1.5831276 | 2.9961869 | 1625 |
| 2.1891334 | 4.5603147 | INSIDE | | 1.7661957 | 3.401558 | 855 |
| 1.7403907 | 3.3412564 | INSIDE | 1557.984 | 1.940196 | 3.8375778 | 2095 |
| 1.9423997 | 3.8434441 | INSIDE | | 1.9435226 | 3.8464368 | 3867 |
| 2.2076719 | 4.6192925 | INSIDE | | 1.6407636 | 3.1183084 | 451 |
| 2.2403953 | 4.7252652 | INSIDE | | 1.2699003 | 2.411449 | 5552 |
| 2.2329595 | 4.7009733 | INSIDE | 115.7455 | 1.7319763 | 3.3218255 | 756 |
| 1.7066139 | 3.2639386 | INSIDE | | 1.4673084 | 2.7650554 | 4443 |
| 1.611701 | 3.0561196 | INSIDE | 596.14 | 1.7767758 | 3.4265953 | 522 |
| 2.4204638 | 5.353431 | INSIDE | 86.2289 | | | |
| 1.9692258 | 3.9155794 | INSIDE | | 1.6576375 | 3.1549945 | 4316 |
| 1.9536117 | 3.8734301 | INSIDE | 162.1541 | 1.1332144 | 2.1934691 | 4591 |
| 2.0211196 | 4.0589867 | INSIDE | 365.362 | 1.7481312 | 3.3592314 | 5398 |
| 1.9848131 | 3.9581138 | INSIDE | 744.936 | 1.6726711 | 3.188043 | 767 |
| 2.2480912 | 4.750539 | INSIDE | | | | |
| 2.326798 | 5.0169063 | INSIDE | 116.2639 | | | |
| 1.8581791 | 3.6254978 | INSIDE | 389.3897 | 1.9655862 | 3.9057137 | 1725 |
| 1.7115769 | 3.2751861 | INSIDE | 219.2823 | 1.6793528 | 3.2028424 | 2614 |
| 2.1799588 | 4.5314061 | INSIDE | 793.9299 | 1.5900004 | 3.0104943 | 4759 |
| 2.1084177 | 4.3121809 | INSIDE | | 2.0534651 | 4.1510177 | 776 |
| 1.8143313 | 3.5169658 | INSIDE | 232.284 | 1.5066884 | 2.8415703 | 2112 |
| 1.6934294 | 3.234246 | INSIDE | | 1.2363114 | 2.355954 | 5346 |
| 2.3405678 | 5.0650194 | INSIDE | 1647.264 | 1.5018154 | 2.8319885 | 5132 |
| 2.2691028 | 4.8202327 | INSIDE | 404.2263 | 1.5719705 | 2.9731052 | 2901 |
| 2.8411815 | 7.1660668 | INSIDE | 194.0461 | 2.3968515 | 5.2665256 | 3390 |
| 2.1115851 | 4.3216586 | INSIDE | 418.8553 | 1.4910372 | 2.8109099 | 875 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.8680211 | 3.6503153 | INSIDE | 127.3453 | 1.5027765 | 2.8338757 | 4271 |
| 2.5456967 | 5.8389004 | INSIDE | | 2.0785294 | 4.2237645 | 158 |
| 2.1146507 | 4.3308515 | INSIDE | 260.3969 | | | |
| 1.9618753 | 3.8956803 | INSIDE | 124.2029 | 1.4050602 | 2.6482883 | 825 |
| 1.8652503 | 3.6433114 | INSIDE | 329.893 | 1.5421352 | 2.912252 | 3048 |
| 1.5985931 | 3.0284784 | INSIDE | 754.2505 | 1.5535733 | 2.9354329 | 2655 |
| 1.6831826 | 3.211356 | INSIDE | | 1.7697788 | 3.4100167 | 5031 |
| 1.9409529 | 3.8395917 | INSIDE | 168.2331 | | | |
| 2.067387 | 4.1912687 | INSIDE | | | | |
| 2.4015343 | 5.2836478 | INSIDE | 269.9008 | 1.6844889 | 3.2142651 | 4475 |
| 1.9346542 | 3.8228649 | INSIDE | 1312.461 | 1.6474577 | 3.1328109 | 3047 |
| 1.710995 | 3.2738654 | INSIDE | 1153.444 | 1.3518732 | 2.5524332 | 4157 |
| 2.6506314 | 6.2794204 | INSIDE | | 1.572155 | 2.9734854 | 576 |
| 1.6432934 | 3.1237812 | INSIDE | 176.7251 | 1.4089274 | 2.6553967 | 3649 |
| 2.0740783 | 4.2107531 | INSIDE | 283.124 | 2.065027 | 4.1844181 | 59 |
| 2.693221 | 6.4675576 | INSIDE | 1247.747 | | | |
| 2.474797 | 5.5588906 | INSIDE | | 1.4748194 | 2.7794885 | 4976 |
| 2.1370168 | 4.3985158 | INSIDE | | 1.8495307 | 3.6038294 | 2427 |
| 1.9856194 | 3.9603266 | INSIDE | 1326.651 | 1.5533035 | 2.934884 | 1520 |
| 1.9079406 | 3.7527303 | INSIDE | | 2.2481337 | 4.7506789 | 1680 |
| 1.6611239 | 3.1626281 | INSIDE | 117.2715 | 1.2076545 | 2.3096184 | 1227 |
| 2.2621484 | 4.7970531 | INSIDE | 782.1717 | 1.6543175 | 3.1477424 | 3829 |
| 2.0755086 | 4.2149298 | INSIDE | | 1.6497943 | 3.137889 | 1792 |
| 1.7315997 | 3.3209585 | INSIDE | 113.1315 | 2.1003554 | 4.2881501 | 3068 |
| 2.1075659 | 4.3096356 | INSIDE | 131.9044 | 2.3007774 | 4.927232 | 2428 |
| 2.6604288 | 6.3222093 | INSIDE | 272.2661 | 1.1740292 | 2.2564099 | 5393 |
| 2.2781658 | 4.8506087 | INSIDE | 125.9242 | 1.3266737 | 2.508237 | 4103 |
| 2.1410065 | 4.4106965 | INSIDE | 136.1078 | 1.7479236 | 3.3587481 | 4240 |
| 2.3249679 | 5.0105463 | INSIDE | 1040.729 | 1.1164834 | 2.1681783 | 2740 |
| 2.6268706 | 6.176847 | INSIDE | | 2.401261 | 5.282647 | 347 |
| 1.7966578 | 3.4741446 | INSIDE | 203.5186 | 1.2675384 | 2.4075043 | 3224 |
| 1.8376793 | 3.574346 | INSIDE | 491.6797 | 1.4412707 | 2.7155995 | 2235 |
| 2.132596 | 4.3850582 | INSIDE | 148.198 | | | |
| 2.213095 | 4.6366891 | INSIDE | 978.074 | | | |
| 2.1201708 | 4.3474541 | INSIDE | | | | |
| 1.6348803 | 3.1056178 | INSIDE | 126.3384 | | | |
| 1.6191355 | 3.071909 | INSIDE | 405.101 | 1.0793864 | 2.1131371 | 4641 |
| 1.7068295 | 3.2644264 | INSIDE | | 1.7262992 | 3.3087796 | 1240 |
| 2.1762078 | 4.5196398 | INSIDE | | 1.7555873 | 3.3766375 | 4027 |
| 1.906451 | 3.7488575 | INSIDE | 219.6171 | | | |
| 2.5636332 | 5.9119464 | INSIDE | 392.6774 | 1.932895 | 3.8182062 | 5360 |
| 1.965801 | 3.9062953 | INSIDE | | 1.7122864 | 3.2767972 | 670 |
| 2.6655958 | 6.3448928 | INSIDE | 138.0582 | 1.6829594 | 3.2108592 | 2914 |
| 1.920386 | 3.7852432 | INSIDE | 3209.297 | | | |
| 1.7563845 | 3.3785039 | INSIDE | 890.3903 | | | |
| 2.321057 | 4.9969819 | INSIDE | | 1.4767853 | 2.7832785 | 1558 |
| 2.4602785 | 5.5032295 | INSIDE | 225.1934 | 1.7828726 | 3.4411066 | 2706 |
| 2.6690176 | 6.3599596 | INSIDE | 186.7518 | 2.11241 | 4.3241303 | 1016 |
| 2.020339 | 4.0567911 | INSIDE | 485.6274 | 1.8275268 | 3.549281 | 782 |
| 2.0567713 | 4.1605415 | INSIDE | 94.82884 | 1.8041227 | 3.4921674 | 4273 |
| 2.18214 | 4.5382623 | INSIDE | 161.541 | | | |
| 2.2436004 | 4.7357745 | INSIDE | 488.2792 | 1.1086688 | 2.1564657 | 4343 |
| 2.257434 | 4.781403 | INSIDE | | 2.154612 | 4.4524889 | 1714 |
| 2.5515375 | 5.8625873 | INSIDE | | | | |
| 2.0364707 | 4.1024072 | INSIDE | 213.7835 | 1.6327008 | 3.1009297 | 3094 |
| 2.0188153 | 4.0525087 | INSIDE | 549.7452 | 1.7161249 | 3.2855272 | 885 |
| 1.8071353 | 3.4994672 | INSIDE | | | | |
| 1.8736931 | 3.6646949 | INSIDE | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.7424783 | 3.3460948 | INSIDE | 297.3723 | 1.7604263 | 3.3879822 | 1476 |
| 1.9640664 | 3.9016014 | INSIDE | | | | |
| 2.1677144 | 4.4931101 | INSIDE | 773.3401 | | | |
| 2.227134 | 4.6820294 | INSIDE | | 1.8699441 | 3.6551842 | 1897 |
| 2.395635 | 5.2620866 | INSIDE | | | | |
| 2.0718882 | 4.2043658 | INSIDE | | | | |
| 2.4115608 | 5.3204962 | INSIDE | 855.6252 | 1.7343843 | 3.3273746 | 2497 |
| 2.3020613 | 4.9316188 | INSIDE | | 1.8755558 | 3.6694296 | 2904 |
| 2.1452742 | 4.4237633 | INSIDE | 1091.339 | 1.979798 | 3.9443785 | 1189 |
| 2.1930408 | 4.5726827 | INSIDE | 1991.075 | 2.1375782 | 4.4002278 | 977 |
| 1.7975961 | 3.4764048 | INSIDE | 451.2268 | | | |
| 1.6655589 | 3.1723653 | INSIDE | 93.89393 | 1.4305822 | 2.6955547 | 4882 |
| 2.0990438 | 4.2842534 | INSIDE | 1223.944 | 1.7627441 | 3.3934296 | 2475 |
| 2.0063672 | 4.0176926 | INSIDE | | 1.9789081 | 3.9419462 | 1105 |
| 2.5598779 | 5.8965778 | INSIDE | 292.0179 | 2.002532 | 4.0070264 | 3838 |
| 2.5666552 | 5.9243431 | INSIDE | 751.8943 | 2.0211751 | 4.0591428 | 1664 |
| 2.0802398 | 4.228775 | INSIDE | 136.694 | | | |
| 1.7474504 | 3.3576466 | INSIDE | 1986.798 | 1.8151122 | 3.51887 | 854 |
| 1.7218902 | 3.2986831 | INSIDE | | 1.6122242 | 3.0572281 | 2101 |
| 1.9119906 | 3.7632799 | INSIDE | | | | |
| 1.7897292 | 3.4574999 | INSIDE | 279.2242 | 1.6616243 | 3.1637252 | 1181 |
| 2.4666882 | 5.527734 | INSIDE | 1774.27 | 1.9488636 | 3.8607031 | 1260 |
| 2.056066 | 4.158508 | INSIDE | 153.994 | 1.0041662 | 2.0057839 | 2732 |
| 2.2170708 | 4.6494846 | INSIDE | 753.1589 | 2.1390536 | 4.40473 | 734 |
| 2.3052163 | 4.9424155 | INSIDE | 568.4229 | 1.7254444 | 3.3068197 | 3179 |
| 2.2573607 | 4.78116 | INSIDE | 1064.532 | 1.6238911 | 3.0820518 | 4815 |
| 2.103248 | 4.2967564 | INSIDE | 979.2507 | 2.2715964 | 4.8285714 | 1795 |
| 2.3320472 | 5.0351934 | INSIDE | 337.737 | 1.7315093 | 3.3207504 | 4478 |
| 2.2766497 | 4.845514 | INSIDE | 1081.212 | 1.919989 | 3.7842017 | 1169 |
| 2.052016 | 4.1468504 | INSIDE | | | | |
| 2.5347848 | 5.7949042 | INSIDE | 205.9518 | 2.064172 | 4.1819389 | 663 |
| 2.1169744 | 4.3378327 | INSIDE | 955.2878 | 1.6531825 | 3.145267 | 3967 |
| 2.177599 | 4.5240002 | INSIDE | 195.0457 | 1.728012 | 3.3127102 | 1128 |
| 1.9237969 | 3.7942031 | INSIDE | 230.0502 | 2.0898156 | 4.2569366 | 3132 |
| 1.8656621 | 3.6443515 | INSIDE | 194.6246 | 1.8949046 | 3.7189738 | 1610 |
| 1.7057285 | 3.2619361 | INSIDE | | | | |
| 1.6871073 | 3.220104 | INSIDE | | 1.5704993 | 2.9700749 | 3793 |
| 1.7671707 | 3.4038576 | INSIDE | 287.4104 | 1.1658033 | 2.243581 | 1094 |
| 1.9011002 | 3.7349792 | INSIDE | 142.8392 | 1.7843553 | 3.444645 | 4158 |
| 1.6636633 | 3.1681998 | INSIDE | 870.2985 | 1.637486 | 3.111232 | 1691 |
| 1.7566415 | 3.3791057 | INSIDE | 2013.259 | | | |
| 1.9854432 | 3.9598429 | INSIDE | 107.7566 | 1.7692224 | 3.4087018 | 2656 |
| 1.9738979 | 3.9282804 | INSIDE | 307.8217 | 1.8742936 | 3.6662206 | 4843 |
| 1.8887938 | 3.7032548 | INSIDE | | 1.8204744 | 3.5319732 | 2192 |
| 1.7017766 | 3.253013 | INSIDE | 138.5568 | | | |
| 2.2033453 | 4.6054601 | INSIDE | 107.6844 | 1.8426378 | 3.5866521 | 4527 |
| 1.9508903 | 3.8661304 | INSIDE | 1610.523 | 1.8769519 | 3.6729822 | 385 |
| 2.3870568 | 5.2308913 | INSIDE | | 1.9152822 | 3.7718759 | 1836 |
| 2.331739 | 5.0341179 | INSIDE | 299.4342 | | | |
| 1.8232826 | 3.5388549 | INSIDE | 88.45199 | 1.794512 | 3.4689811 | 3728 |
| 2.0639322 | 4.1812439 | INSIDE | 161.9649 | 1.605204 | 3.0423877 | 1818 |
| 1.6824168 | 3.2096518 | INSIDE | | 1.4750531 | 2.7799388 | 4394 |
| 2.0786014 | 4.2239753 | INSIDE | | 1.5759434 | 2.9813038 | 2939 |
| 2.4392517 | 5.4236035 | INSIDE | 130.1975 | 2.1272502 | 4.3688398 | 146 |
| 1.6214635 | 3.07687 | INSIDE | 220.6787 | | | |
| 2.6837907 | 6.4254197 | INSIDE | | 1.8971739 | 3.7248282 | 3283 |
| 1.99397 | 3.9833162 | INSIDE | 1087.37 | 1.5896778 | 3.0098212 | 4000 |
| 1.8341757 | 3.5656762 | INSIDE | 137.7524 | 2.0357084 | 4.1002401 | 3035 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.1247025 | 4.3611315 | INSIDE | | | | |
| 1.6833117 | 3.2116434 | INSIDE | 122.3459 | 1.2288347 | 2.343776 | 2726 |
| 1.9472564 | 3.8564045 | INSIDE | 167.0757 | | | |
| 1.7991364 | 3.4801184 | INSIDE | 989.7813 | 1.5769707 | 2.9834275 | 1268 |
| 2.0443385 | 4.124841 | INSIDE | | 1.1698233 | 2.2498414 | 2171 |
| 2.6057055 | 6.0868909 | INSIDE | | 2.275995 | 4.8433156 | 3050 |
| 2.312522 | 4.967507 | INSIDE | 522.8445 | 1.2523144 | 2.3822328 | 1960 |
| 2.3097696 | 4.9580389 | INSIDE | 321.3324 | 1.4523383 | 2.7365122 | 988 |
| 2.395307 | 5.2608904 | INSIDE | 686.0703 | 1.7487049 | 3.3605675 | 1945 |
| 1.6002355 | 3.031928 | INSIDE | | 1.4894505 | 2.8078201 | 3090 |
| 2.4086175 | 5.3096527 | INSIDE | 2538.338 | 2.1596107 | 4.4679428 | 3402 |
| 1.996546 | 3.9904349 | INSIDE | | 1.6919134 | 3.2308492 | 3508 |
| 2.1270525 | 4.3682411 | INSIDE | 360.2401 | 1.977518 | 3.9381498 | 1037 |
| 2.4065337 | 5.3019891 | INSIDE | 134.1836 | | | |
| 1.8299701 | 3.555297 | INSIDE | 163.4007 | | | |
| 1.9193465 | 3.7825168 | INSIDE | 372.5968 | 1.8068008 | 3.4986559 | 2653 |
| 1.8376745 | 3.5743341 | INSIDE | | 1.5934386 | 3.0176774 | 3401 |
| 2.075182 | 4.2139757 | INSIDE | 1615.608 | | | |
| 1.5865732 | 3.0033512 | INSIDE | 180.6993 | 1.3875097 | 2.6162669 | 1765 |
| 2.0195374 | 4.0545376 | INSIDE | 116.6928 | 1.898653 | 3.728649 | 4235 |
| 2.2735865 | 4.8352366 | INSIDE | 213.2904 | | | |
| 1.9220631 | 3.789646 | INSIDE | 925.6974 | 1.6754901 | 3.1942785 | 808 |
| 1.7485511 | 3.3602093 | INSIDE | 208.1477 | 1.7766995 | 3.4264141 | 3847 |
| 1.9248861 | 3.7970687 | INSIDE | | | | |
| 1.8815849 | 3.6847964 | INSIDE | 137.1379 | 1.6369416 | 3.1100582 | 2690 |
| 2.2751906 | 4.8406158 | INSIDE | 266.6216 | 1.6836716 | 3.2124447 | 3493 |
| 1.7831496 | 3.4417674 | INSIDE | 1298.333 | 1.559099 | 2.9466976 | 4047 |
| 2.0001132 | 4.0003139 | INSIDE | 673.2634 | | | |
| 1.913106 | 3.7661906 | INSIDE | 856.8138 | 1.9503977 | 3.8648106 | 2116 |
| 1.8663026 | 3.6459698 | INSIDE | | 1.272703 | 2.4161382 | 5293 |
| 2.419367 | 5.3493626 | INSIDE | | 1.9282016 | 3.8058049 | 1426 |
| 1.7597686 | 3.386438 | INSIDE | 356.6268 | 1.4814088 | 2.7922126 | 4786 |
| 1.7520859 | 3.3684524 | INSIDE | 164.5673 | 1.2178769 | 2.3260416 | 2241 |
| 1.6268275 | 3.0883312 | INSIDE | 115.5213 | | | |
| 2.1175985 | 4.3397096 | INSIDE | 227.4084 | 1.5808519 | 2.9914644 | 354 |
| 1.8557708 | 3.6194508 | INSIDE | | 1.652964 | 3.1447907 | 1582 |
| 1.8154805 | 3.5197684 | INSIDE | | 1.5664436 | 2.9617371 | 2395 |
| 1.7568927 | 3.3796942 | INSIDE | | 1.4212985 | 2.6782646 | 4486 |
| 2.5472183 | 5.8450619 | INSIDE | | 1.887868 | 3.7008791 | 2022 |
| 2.1675568 | 4.4926193 | INSIDE | | 1.7004106 | 3.2499344 | 4046 |
| 2.3525832 | 5.1073793 | INSIDE | | 1.5770718 | 2.9836365 | 5533 |
| 2.2729113 | 4.8329742 | INSIDE | 89.58789 | | | |
| 2.0493279 | 4.139131 | INSIDE | 354.2428 | 1.8220576 | 3.5358513 | 2762 |
| 1.6808102 | 3.2060795 | INSIDE | | 1.4375157 | 2.7085406 | 3382 |
| 1.8466557 | 3.5966548 | INSIDE | | 1.6115555 | 3.0558114 | 5027 |
| 1.8604113 | 3.6311117 | INSIDE | 334.2851 | 1.1959115 | 2.2908953 | 5412 |
| 2.6723075 | 6.3744793 | INSIDE | 170.7828 | 2.275926 | 4.8430839 | 1203 |
| 1.7601693 | 3.3873787 | INSIDE | | | | |
| 2.0643737 | 4.1825237 | INSIDE | 116.3834 | | | |
| 2.2762256 | 4.8440898 | INSIDE | 425.1991 | 1.7094482 | 3.2703572 | 3930 |
| 1.9635911 | 3.9003162 | INSIDE | 228.2093 | | | |
| 2.361259 | 5.1381856 | INSIDE | | 1.1893972 | 2.2805743 | 3706 |
| 1.5853251 | 3.0007541 | INSIDE | 246.756 | 1.5392513 | 2.9064363 | 4646 |
| 2.312454 | 4.9672729 | INSIDE | 486.3991 | 1.5116634 | 2.8513861 | 2248 |
| 2.19409 | 4.5760094 | INSIDE | | 1.8288978 | 3.5526555 | 1650 |
| 2.0602734 | 4.1706533 | INSIDE | 98.5764 | 1.039364 | 2.0553214 | 5434 |
| 1.9320635 | 3.8160062 | INSIDE | 122.4207 | 2.0716922 | 4.2037947 | 2645 |
| 1.855742 | 3.6193785 | INSIDE | 590.951 | 1.5760627 | 2.9815503 | 1786 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.756259 | 3.37821 | INSIDE | | 0.7551807 | 1.687843 | 5394 |
| 2.2857814 | 4.8762815 | INSIDE | | | | |
| 1.723679 | 3.3027757 | INSIDE | | 1.6167272 | 3.0667854 | 4177 |
| 2.2600605 | 4.7901157 | INSIDE | 137.5227 | 2.0460634 | 4.1297756 | 3186 |
| 1.6048307 | 3.0416006 | INSIDE | 590.5848 | 1.0957377 | 2.1372234 | 5076 |
| 2.3871336 | 5.2311698 | INSIDE | 179.7549 | 1.9539769 | 3.8744107 | 821 |
| 2.321626 | 4.9989531 | INSIDE | 292.8547 | 2.1345112 | 4.3908833 | 2284 |
| 1.8489566 | 3.6023955 | INSIDE | 144.2812 | | | |
| 1.6817813 | 3.2082383 | INSIDE | 429.9744 | 1.5846 | 2.9992463 | 3112 |
| 2.0112312 | 4.031261 | INSIDE | 1953.211 | | | |
| 1.8873936 | 3.6996623 | INSIDE | 352.7046 | 1.4433213 | 2.7194621 | 1100 |
| 2.0253139 | 4.0708044 | INSIDE | 448.6834 | | | |
| 1.6310496 | 3.0973826 | INSIDE | | | | |
| 1.8772151 | 3.6736523 | INSIDE | 228.2405 | 1.8131868 | 3.5141769 | 4096 |
| 2.7736628 | 6.8384189 | INSIDE | 125.1492 | 1.619181 | 3.0720059 | 4109 |
| 1.7707747 | 3.4123715 | INSIDE | 1218.738 | 1.2562594 | 2.3887558 | 4334 |
| 1.7968522 | 3.4746128 | INSIDE | 309.6927 | 1.8497016 | 3.6042563 | 1461 |
| 1.5953153 | 3.0216055 | INSIDE | 634.992 | 1.78912 | 3.4560402 | 799 |
| 2.330021 | 5.0281267 | INSIDE | 220.1097 | 1.8928859 | 3.7137737 | 942 |
| 1.7362642 | 3.3317132 | INSIDE | 178.8115 | 1.5290517 | 2.8859608 | 3139 |
| 2.014313 | 4.0398816 | INSIDE | 887.667 | 1.5935595 | 3.0179303 | 3071 |
| 2.6182303 | 6.1399644 | INSIDE | 524.5089 | 1.40661 | 2.6511347 | 1451 |
| 2.0690598 | 4.1961312 | INSIDE | 350.9181 | 1.4252605 | 2.6856299 | 5161 |
| 1.8561183 | 3.6203227 | INSIDE | 181.4362 | 1.4863123 | 2.8017191 | 364 |
| 1.9351227 | 3.8241065 | INSIDE | 281.1681 | 1.52791 | 2.8836778 | 3011 |
| 2.079189 | 4.2256961 | INSIDE | 1702.371 | | | |
| 1.9984553 | 3.9957195 | INSIDE | 3073.53 | 1.6123867 | 3.0575725 | 1863 |
| 2.313054 | 4.9693391 | INSIDE | 751.634 | | | |
| 2.1592495 | 4.4668243 | INSIDE | 151.7241 | 1.8593918 | 3.6285466 | 4876 |
| 1.624597 | 3.0835602 | INSIDE | 426.7791 | 2.6106544 | 6.1078067 | 119 |
| 1.7255902 | 3.3071539 | INSIDE | 427.3618 | 1.4788666 | 2.7872967 | 4411 |
| 2.3192012 | 4.9905582 | INSIDE | 698.7789 | 1.7065859 | 3.2638752 | 4090 |
| 2.2077198 | 4.6194459 | INSIDE | 267.9345 | 1.5662202 | 2.9612785 | 2243 |
| 2.2014606 | 4.5994476 | INSIDE | 1048.844 | | | |
| 2.0870636 | 4.248824 | INSIDE | 200.5682 | | | |
| 1.9557924 | 3.8792894 | INSIDE | 87.77781 | 1.8237631 | 3.5400337 | 2015 |
| 2.2913268 | 4.8950609 | INSIDE | | 1.9796892 | 3.9440811 | 3155 |
| 1.8950827 | 3.719433 | INSIDE | 119.8658 | 1.8878593 | 3.7008568 | 4357 |
| 1.6258872 | 3.086319 | INSIDE | | 1.957701 | 3.8844248 | 1422 |
| 1.7449539 | 3.3518414 | INSIDE | | 1.5845355 | 2.9991122 | 3255 |
| 2.0915563 | 4.2620759 | INSIDE | 821.5455 | 1.1929921 | 2.2862642 | 3012 |
| 1.8685753 | 3.6517179 | INSIDE | 145.0843 | 1.4223944 | 2.6802998 | 3315 |
| 2.0866368 | 4.2475673 | INSIDE | 253.4713 | 1.2622458 | 2.3986885 | 1925 |
| 2.4748132 | 5.5589531 | INSIDE | 1121.487 | 1.3692898 | 2.5834336 | 1482 |
| 2.2927973 | 4.9000528 | INSIDE | 506.5373 | 1.8425673 | 3.5864768 | 3221 |
| 2.275268 | 4.8408755 | INSIDE | 153.3663 | 1.9633938 | 3.8997829 | 3422 |
| 1.8919418 | 3.7113442 | INSIDE | 130.3043 | 1.205113 | 2.3055533 | 4979 |
| 1.7896872 | 3.4573992 | INSIDE | | 1.5352978 | 2.8984825 | 2382 |
| 2.403325 | 5.29021 | INSIDE | 257.8928 | | | |
| 2.513761 | 5.7110697 | INSIDE | 100.2784 | 1.5934908 | 3.0177866 | 3080 |
| 2.3615937 | 5.1393778 | INSIDE | 611.9572 | | | |
| 1.6505489 | 3.1395307 | INSIDE | 498.0313 | 1.0731599 | 2.1040367 | 4575 |
| 2.0787337 | 4.2243627 | INSIDE | 124.403 | 1.4599757 | 2.7510373 | 3892 |
| 2.0693433 | 4.1969559 | INSIDE | 317.8923 | 1.8972269 | 3.7249651 | 362 |
| 2.413048 | 5.3259837 | INSIDE | 332.1224 | 2.2215595 | 4.6639732 | 1452 |
| 1.8078666 | 3.5012416 | INSIDE | 772.2004 | 1.7110661 | 3.2740267 | 2172 |
| 2.1246352 | 4.3609281 | INSIDE | 984.1854 | | | |
| 2.3114374 | 4.9637739 | INSIDE | | 1.7058225 | 3.2621486 | 1917 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.9729857 | 3.9257973 | INSIDE | | 1.775853 | 3.4244042 | 4809 |
| 2.7696226 | 6.819295 | INSIDE | 538.1694 | 1.9355413 | 3.8252162 | 688 |
| 1.793219 | 3.4658735 | INSIDE | | 1.946271 | 3.8537714 | 2576 |
| 1.7522999 | 3.3689521 | INSIDE | | 1.5574878 | 2.9434085 | 2575 |
| 1.9945344 | 3.9848748 | INSIDE | 111.9595 | 1.8198773 | 3.5305117 | 3272 |
| 2.2238905 | 4.671515 | INSIDE | | 1.7785785 | 3.4308796 | 2824 |
| 1.9629992 | 3.8987164 | INSIDE | 710.4863 | 1.5055915 | 2.8394106 | 1797 |
| 2.2692015 | 4.8205625 | INSIDE | 372.821 | 1.8136741 | 3.515364 | 458 |
| 1.855169 | 3.6179413 | INSIDE | | 1.9643917 | 3.9024812 | 477 |
| 1.7270516 | 3.3105057 | INSIDE | 897.6125 | 1.6812519 | 3.2070612 | 1862 |
| 1.7192972 | 3.2927596 | INSIDE | | 1.3693938 | 2.5836198 | 3517 |
| 2.0917645 | 4.2626911 | INSIDE | 242.7957 | 1.7469596 | 3.3565046 | 4875 |
| 2.1259959 | 4.3650431 | INSIDE | 412.3169 | 2.1108928 | 4.3195853 | 1432 |
| 2.3109076 | 4.9619514 | INSIDE | 953.1483 | 1.9070201 | 3.7503366 | 228 |
| 2.5115843 | 5.7024595 | INSIDE | 671.7346 | 1.7445818 | 3.350977 | 1682 |
| 2.0229435 | 4.0641214 | INSIDE | 453.7735 | | | |
| 1.9996864 | 3.9991306 | INSIDE | 152.9394 | 1.5560197 | 2.9404148 | 2981 |
| 1.8462116 | 3.5955478 | INSIDE | 3884.573 | 1.3944148 | 2.628819 | 3249 |
| 1.775669 | 3.4239675 | INSIDE | 268.7587 | | | |
| 1.9734757 | 3.9271309 | INSIDE | 173.5255 | 1.774442 | 3.4210567 | 4035 |
| 2.1466377 | 4.4279462 | INSIDE | 1914.529 | 1.8133681 | 3.5146185 | 2773 |
| 1.9707884 | 3.9198227 | INSIDE | 810.0961 | 1.4243567 | 2.683948 | 2631 |
| 2.319844 | 4.9927823 | INSIDE | 174.2363 | 2.0287194 | 4.0804249 | 4426 |
| 2.099558 | 4.2857806 | INSIDE | 696.9088 | 1.1708077 | 2.2513771 | 5366 |
| 2.1377718 | 4.4008183 | INSIDE | 530.2264 | 1.9137172 | 3.7677865 | 2574 |
| 1.7243751 | 3.3043697 | INSIDE | 134.1698 | 1.5058857 | 2.8399897 | 3890 |
| 1.9353436 | 3.8246921 | INSIDE | 239.4312 | | | |
| 1.7095419 | 3.2705696 | INSIDE | 1705.836 | 2.329191 | 5.0252348 | 202 |
| 2.4270988 | 5.3781083 | INSIDE | | 2.1177568 | 4.3401858 | 4534 |
| 1.754856 | 3.3749263 | INSIDE | 284.9873 | 1.5387979 | 2.9055231 | 2608 |
| 2.1831872 | 4.5415577 | INSIDE | 109.3291 | 2.1683717 | 4.4951576 | 4482 |
| 1.7815324 | 3.4379115 | INSIDE | 195.7838 | 1.6965096 | 3.2411586 | 3492 |
| 1.9692034 | 3.9155186 | INSIDE | 2267.305 | 1.4310817 | 2.6964882 | 4362 |
| 2.172598 | 4.5083452 | INSIDE | | 2.1737745 | 4.5120232 | 594 |
| 1.829099 | 3.553151 | INSIDE | | 1.7154775 | 3.2840532 | 1307 |
| 1.9689207 | 3.9147514 | INSIDE | | 1.002778 | 2.0038548 | 4143 |
| 1.647986 | 3.1339583 | INSIDE | 1028.351 | 1.345088 | 2.5404569 | 3297 |
| 2.2702718 | 4.8241401 | INSIDE | 1102.973 | 1.819201 | 3.5288571 | 501 |
| 2.166612 | 4.4896781 | INSIDE | 313.0247 | | | |
| 2.0837104 | 4.2389601 | INSIDE | 568.1115 | 1.9638249 | 3.9009484 | 3660 |
| 2.6059885 | 6.088085 | INSIDE | 134.698 | 2.0884848 | 4.2530116 | 1225 |
| 2.2094665 | 4.6250421 | INSIDE | 533.0004 | 1.910868 | 3.7603527 | 1957 |
| 2.177014 | 4.5221662 | INSIDE | | 1.3206226 | 2.4977388 | 3743 |
| 1.7403716 | 3.3412122 | INSIDE | 137.459 | 1.9294814 | 3.8091825 | 2141 |
| 1.8389614 | 3.5775239 | INSIDE | | 1.9234307 | 3.7932401 | 416 |
| 1.7529517 | 3.3704745 | INSIDE | 303.1516 | 1.6690872 | 3.1801332 | 4448 |
| 1.9671695 | 3.9100024 | INSIDE | 167.1114 | 1.8255439 | 3.5444061 | 545 |
| 2.0818942 | 4.2336271 | INSIDE | 704.7319 | 1.9490497 | 3.8612011 | 1702 |
| 1.8443215 | 3.5908403 | INSIDE | | 1.6832643 | 3.2115379 | 1918 |
| 1.971188 | 3.9209086 | INSIDE | 1899.157 | 1.7722957 | 3.4159709 | 230 |
| 2.605867 | 6.0875723 | INSIDE | 281.5916 | 1.7077205 | 3.2664431 | 3514 |
| 1.9711925 | 3.9209208 | INSIDE | | 1.7352804 | 3.329442 | 3820 |
| 2.090258 | 4.2582422 | INSIDE | | 1.8851051 | 3.6937983 | 1327 |
| 1.7071413 | 3.265132 | INSIDE | | 1.8953542 | 3.720133 | 518 |
| 1.7493299 | 3.3620237 | INSIDE | | | | |
| 1.6361163 | 3.1082796 | INSIDE | 135.2052 | 1.7105472 | 3.2728494 | 4059 |
| 1.8769255 | 3.672915 | INSIDE | | | | |
| 2.353962 | 5.1122628 | INSIDE | 809.244 | 1.8771365 | 3.6734522 | 1045 |

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|---|---|---|---|---|---|---|
| 1.8529803 | 3.6124567 | INSIDE | 645.7996 | 1.9836469 | 3.9549156 | 468 |
| 2.1189134 | 4.3436667 | INSIDE | | 1.8125021 | 3.5125094 | 1752 |
| 2.4260206 | 5.3740904 | INSIDE | | | | |
| 2.047198 | 4.1330247 | INSIDE | 108.7765 | 2.0800307 | 4.2281621 | 3535 |
| 1.7595209 | 3.3858567 | INSIDE | 508.0292 | 1.4952531 | 2.819136 | 4714 |
| 1.8054483 | 3.4953776 | INSIDE | 845.2052 | 1.4339143 | 2.7017877 | 4199 |
| 2.030757 | 4.086192 | INSIDE | 546.563 | 1.5726324 | 2.9744695 | 831 |
| 2.6015406 | 6.069344 | INSIDE | 315.4379 | 1.7111024 | 3.2741091 | 5082 |
| 1.9694049 | 3.9160655 | INSIDE | 2710.293 | 1.4312464 | 2.696796 | 2197 |
| 2.4429524 | 5.4375336 | INSIDE | 714.9833 | 1.4556664 | 2.7428323 | 4327 |
| 1.5880047 | 3.0063328 | INSIDE | 849.5323 | 1.6603222 | 3.1608711 | 1508 |
| 1.919589 | 3.7831527 | INSIDE | 202.0478 | 2.3656833 | 5.153967 | 912 |
| 1.9120477 | 3.7634289 | INSIDE | 132.5961 | | | |
| 2.0399811 | 4.1124014 | INSIDE | | 1.4185963 | 2.6732528 | 2082 |
| 2.2184436 | 4.6539109 | INSIDE | | | | |
| 2.0146365 | 4.0407875 | INSIDE | 350.2027 | 2.275137 | 4.840436 | 2406 |
| 2.1568284 | 4.4593344 | INSIDE | 239.783 | 1.52351 | 2.8748965 | 4384 |
| 1.6562274 | 3.1519123 | INSIDE | | 1.6468445 | 3.1314796 | 1881 |
| 1.603197 | 3.0381582 | INSIDE | 919.7102 | | | |
| 1.9766794 | 3.9358614 | INSIDE | 1081.089 | | | |
| 2.0410833 | 4.1155445 | INSIDE | 876.5305 | 1.7053815 | 3.2611516 | 2084 |
| 1.784102 | 3.4440402 | INSIDE | 269.3589 | 1.8340709 | 3.5654172 | 3152 |
| 1.6336199 | 3.1029058 | INSIDE | 1106.769 | 1.5464475 | 2.9209699 | 3059 |
| 2.187329 | 4.5546147 | INSIDE | | 1.5390711 | 2.9060733 | 2890 |
| 1.9516094 | 3.8680579 | INSIDE | | | | |
| 2.3373132 | 5.053606 | INSIDE | | | | |
| 2.0164733 | 4.0459354 | INSIDE | 138.0004 | 1.7971983 | 3.4754464 | 2895 |
| 1.802075 | 3.4872142 | INSIDE | 188.1277 | 1.5439854 | 2.9159892 | 4902 |
| 2.3811977 | 5.2096906 | INSIDE | | 1.8768466 | 3.6727141 | 3749 |
| 2.0927317 | 4.2655498 | INSIDE | 1070.529 | 2.0047867 | 4.0132936 | 440 |
| 2.085344 | 4.2437627 | INSIDE | 170.7072 | 1.6367078 | 3.1095543 | 466 |
| 2.1443822 | 4.421029 | INSIDE | | 2.1710846 | 4.5036184 | 1966 |
| 1.8699318 | 3.655153 | INSIDE | 922.7813 | 2.2153616 | 4.6439795 | 931 |
| 1.963769 | 3.9007972 | INSIDE | 91.74957 | | | |
| 2.0304203 | 4.0852385 | INSIDE | 589.6002 | 1.8925009 | 3.7127828 | 886 |
| 1.920871 | 3.7865159 | INSIDE | 264.948 | 1.4740599 | 2.7780256 | 2347 |
| 1.6639613 | 3.1688542 | INSIDE | 96.30839 | 1.1987331 | 2.2953801 | 3676 |
| 1.5915673 | 3.0137658 | INSIDE | | 1.2005157 | 2.2982181 | 4818 |
| 1.7964525 | 3.4736502 | INSIDE | 1344.444 | 2.2370574 | 4.7143452 | 370 |
| 1.646154 | 3.1299812 | INSIDE | 1872.436 | 1.4701147 | 2.7704392 | 1538 |
| 1.9400274 | 3.8371294 | INSIDE | | | | |
| 1.8238488 | 3.540244 | INSIDE | 92.9524 | 1.8791388 | 3.6785541 | 410 |
| 1.801811 | 3.4865762 | INSIDE | | | | |
| 2.497847 | 5.6484186 | INSIDE | 593.3823 | 2.3208907 | 4.996406 | 958 |
| 1.6434784 | 3.1241818 | INSIDE | 513.3182 | 1.5243001 | 2.8764713 | 4657 |
| 2.4266138 | 5.3763006 | INSIDE | | | | |
| 1.7896117 | 3.4572183 | INSIDE | 625.8681 | | | |
| 1.7693594 | 3.4090255 | INSIDE | | 1.4609227 | 2.7528437 | 2725 |
| 2.132533 | 4.3848667 | INSIDE | 244.3794 | 1.9874027 | 3.9652249 | 3158 |
| 2.0640752 | 4.1816584 | INSIDE | | | | |
| 1.9957125 | 3.9881302 | INSIDE | | 2.0218961 | 4.0611719 | 903 |
| 1.8105083 | 3.5076585 | INSIDE | | 1.22966 | 2.3451172 | 5431 |
| 2.10709 | 4.3082143 | INSIDE | 109.7342 | | | |
| 1.7929456 | 3.4652168 | INSIDE | 248.4437 | 1.4816307 | 2.7926421 | 4447 |
| 1.7096212 | 3.2707493 | INSIDE | 254.5819 | 1.5568374 | 2.9420819 | 5428 |
| 1.8928227 | 3.713611 | INSIDE | 501.3337 | 1.5145831 | 2.8571625 | 4616 |
| 1.9561428 | 3.8802317 | INSIDE | 1844.117 | 2.7945657 | 6.9382205 | 47 |
| 2.0380347 | 4.106857 | INSIDE | 389.6653 | 1.8666806 | 3.6469252 | 2677 |

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|---|---|---|---|---|---|---|
| 1.9437028 | 3.8469173 | INSIDE | | 1.8673528 | 3.6486248 | 1002 |
| 2.0786853 | 4.224221 | INSIDE | 151.2737 | 2.2210913 | 4.6624598 | 1775 |
| 2.1156032 | 4.3337118 | INSIDE | 265.7844 | 2.0625424 | 4.1772179 | 2863 |
| 1.9361131 | 3.8267326 | INSIDE | 319.3314 | | | |
| 1.9317839 | 3.8152667 | INSIDE | | | | |
| 2.9349272 | 7.6471766 | INSIDE | 128.625 | 1.8461223 | 3.5953253 | 2924 |
| 1.7925761 | 3.4643294 | INSIDE | 440.941 | | | |
| 1.6976976 | 3.2438286 | INSIDE | 131.7698 | 1.9270002 | 3.8026369 | 1033 |
| 1.7382988 | 3.3364151 | INSIDE | | | | |
| 2.0700157 | 4.1989124 | INSIDE | 201.2715 | 1.8861542 | 3.6964854 | 5479 |
| 1.6430012 | 3.1231486 | INSIDE | | | | |
| 2.0017328 | 4.0048072 | INSIDE | 251.1968 | 1.8676354 | 3.6493396 | 1258 |
| 2.3177118 | 4.9854088 | INSIDE | 246.5106 | 1.5878572 | 3.0060254 | 2206 |
| 2.0496948 | 4.1401838 | INSIDE | | | | |
| 1.6270201 | 3.0887436 | INSIDE | | | | |
| 1.8461536 | 3.5954033 | INSIDE | 1579.056 | | | |
| 2.2321079 | 4.6981993 | INSIDE | 202.846 | 1.8689973 | 3.6527862 | 3209 |
| 2.1041815 | 4.2995376 | INSIDE | | 1.6721599 | 3.1869136 | 1888 |
| 2.4051867 | 5.2970411 | INSIDE | 2182.495 | 2.2723167 | 4.8309827 | 1880 |
| 1.7300243 | 3.3173341 | INSIDE | 146.7515 | | | |
| 2.0635645 | 4.1801784 | INSIDE | | | | |
| 2.0463073 | 4.1304739 | INSIDE | 432.2488 | 1.632107 | 3.0996536 | 717 |
| 1.9269001 | 3.8023731 | INSIDE | 108.53 | 1.6302922 | 3.0957569 | 3926 |
| 2.0424292 | 4.1193857 | INSIDE | 157.5613 | 1.449067 | 2.7303142 | 2384 |
| 2.163593 | 4.4802927 | INSIDE | | 1.466387 | 2.76329 | 1803 |
| 1.5895855 | 3.0096287 | INSIDE | 316.3534 | | | |
| 2.4315767 | 5.394827 | INSIDE | 216.7661 | 2.008631 | 4.0240019 | 556 |
| 1.9129722 | 3.7658413 | INSIDE | 132.8163 | 1.6699535 | 3.1820434 | 1738 |
| 2.4367986 | 5.4143892 | INSIDE | 106.6014 | 2.1787164 | 4.5275055 | 2921 |
| 2.026832 | 4.0750902 | INSIDE | | 2.5821202 | 5.9881908 | 1837 |
| 2.28231 | 4.8645623 | INSIDE | 89.6886 | 2.0371103 | 4.1042264 | 5365 |
| 2.0935056 | 4.2678385 | INSIDE | 672.2916 | 2.1741152 | 4.5130889 | 190 |
| 2.0802135 | 4.2286979 | INSIDE | 166.3677 | 1.5082895 | 2.8447256 | 5030 |
| 2.48238 | 5.5881858 | INSIDE | 1101.971 | 1.8059994 | 3.496713 | 4418 |
| 1.7318876 | 3.3216213 | INSIDE | 449.7423 | | | |
| 1.9145131 | 3.7698656 | INSIDE | 120.1537 | 1.6076499 | 3.04755 | 786 |
| 1.8855221 | 3.6948661 | INSIDE | 427.392 | 1.4809058 | 2.7912393 | 4379 |
| 1.8345104 | 3.5665035 | INSIDE | 833.4244 | 1.4547596 | 2.7411088 | 2264 |
| 1.9965996 | 3.9905832 | INSIDE | 320.7737 | 1.8217412 | 3.5350759 | 4136 |
| 1.7492821 | 3.3619123 | INSIDE | 133.3608 | | | |
| 2.2334867 | 4.7026915 | INSIDE | 523.8973 | 1.8966153 | 3.7233863 | 1412 |
| 1.8636819 | 3.6393528 | INSIDE | 1641.259 | | | |
| 2.36663 | 5.1573502 | INSIDE | 163.2175 | 2.949139 | 7.7228802 | 409 |
| 1.8821642 | 3.6862763 | INSIDE | 339.8318 | 1.9555844 | 3.8787301 | 1137 |
| 1.9646761 | 3.9032506 | INSIDE | 1042.694 | 2.0877585 | 4.2508711 | 2705 |
| 2.3164043 | 4.9808926 | INSIDE | 180.9545 | 2.1255982 | 4.36384 | 729 |
| 1.6789018 | 3.2018413 | INSIDE | 72.96561 | | | |
| 2.2593906 | 4.787892 | INSIDE | 521.6797 | 2.124137 | 4.3594224 | 434 |
| 2.203195 | 4.6049803 | INSIDE | 530.5475 | 1.5763401 | 2.9821237 | 5541 |
| 2.6494641 | 6.2743417 | INSIDE | 1026.387 | 1.610052 | 3.0526284 | 3957 |
| 2.2051146 | 4.6111117 | INSIDE | 5801.294 | 2.8350768 | 7.135808 | 34 |
| 2.0999322 | 4.2868924 | INSIDE | 647.6238 | 1.1926494 | 2.2857211 | 2170 |
| 1.9437406 | 3.8470181 | INSIDE | | | | |
| 1.7661009 | 3.4013345 | INSIDE | 122.5008 | 1.4856195 | 2.800374 | 2673 |
| 1.8107806 | 3.5083206 | INSIDE | | | | |
| 2.0045834 | 4.0127281 | INSIDE | 177.7128 | | | |
| 1.8389535 | 3.5775043 | INSIDE | 469.6433 | 1.6364566 | 3.1090129 | 5066 |
| 1.9677266 | 3.9115126 | INSIDE | 1171.48 | 1.6775239 | 3.1987847 | 3111 |

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|---|---|---|---|---|---|---|
| 1.9541906 | 3.8749847 | INSIDE | 849.8795 | 1.981356 | 3.9486404 | 929 |
| 1.943458 | 3.8462646 | INSIDE | | 1.5694697 | 2.967956 | 3950 |
| 1.6370971 | 3.1103935 | INSIDE | | | | |
| 2.129322 | 4.3751182 | INSIDE | 216.5735 | | | |
| 1.7868042 | 3.4504971 | INSIDE | 1702.729 | 1.6095461 | 3.0515582 | 2250 |
| 1.8600068 | 3.6300937 | INSIDE | 280.7838 | | | |
| 2.1951337 | 4.579321 | INSIDE | | | | |
| 1.6975542 | 3.2435062 | INSIDE | | 1.4225311 | 2.6805538 | 4966 |
| 2.0890443 | 4.2546613 | INSIDE | 129.2019 | | | |
| 1.9324945 | 3.8171463 | INSIDE | 115.1044 | 1.2915078 | 2.4478375 | 1641 |
| 2.0423288 | 4.119099 | INSIDE | 308.3125 | 1.6590798 | 3.1581502 | 1706 |
| 2.1031344 | 4.2964181 | INSIDE | 294.1147 | 1.3348218 | 2.5224432 | 1949 |
| 1.7000157 | 3.2490449 | INSIDE | 126.8178 | 1.8135204 | 3.5149895 | 1403 |
| 2.0127628 | 4.035543 | INSIDE | 313.6469 | | | |
| 1.8336381 | 3.5643478 | INSIDE | 1334.592 | 1.5156844 | 2.8593444 | 3608 |
| 1.7270269 | 3.310449 | INSIDE | 394.4825 | 1.7446089 | 3.35104 | 1708 |
| 2.4852338 | 5.5992508 | INSIDE | 140.4409 | 1.8361748 | 3.5706205 | 2759 |
| 1.8116906 | 3.5105342 | INSIDE | 634.712 | 1.8828558 | 3.6880438 | 467 |
| 1.8836918 | 3.6901816 | INSIDE | 134.424 | 1.5157831 | 2.85954 | 4544 |
| 2.1214688 | 4.3513673 | INSIDE | 142.6 | 1.7559311 | 3.3774422 | 4971 |
| 1.7426351 | 3.3464584 | INSIDE | 420.7022 | 2.0343583 | 4.0964048 | 943 |
| 1.9844706 | 3.9571743 | INSIDE | 1559.659 | 1.5059361 | 2.8400889 | 1923 |
| 2.0288324 | 4.0807445 | INSIDE | 252.2615 | 1.7801259 | 3.4345615 | 686 |
| 1.6686163 | 3.1790954 | INSIDE | 122.6766 | | | |
| 2.598547 | 6.0567632 | INSIDE | 99.23986 | | | |
| 2.5667694 | 5.9248121 | INSIDE | 882.9536 | 1.6771542 | 3.1979651 | 1070 |
| 2.1570058 | 4.4598828 | INSIDE | 126.6702 | 2.0459392 | 4.1294201 | 3333 |
| 1.7614095 | 3.3902919 | INSIDE | | | | |
| 1.9928565 | 3.980243 | INSIDE | 1038.704 | 1.8782295 | 3.6762363 | 570 |
| 2.018959 | 4.0529124 | INSIDE | 137.6398 | 1.7630517 | 3.3941532 | 2209 |
| 2.0472584 | 4.1331978 | INSIDE | 213.812 | 1.8219892 | 3.5356837 | 2187 |
| 1.9297074 | 3.8097792 | INSIDE | | | | |
| 1.6938182 | 3.2351177 | INSIDE | 166.5043 | 1.3850296 | 2.6117732 | 1089 |
| 2.3378944 | 5.0556423 | INSIDE | | 1.9970537 | 3.9918395 | 1224 |
| 2.6962674 | 6.481229 | INSIDE | | | | |
| 2.4470837 | 5.4531268 | INSIDE | 165.8475 | 1.2431905 | 2.3672146 | 5419 |
| 2.144611 | 4.4217302 | INSIDE | 163.1822 | 1.284784 | 2.4364557 | 1363 |
| 2.0716004 | 4.2035272 | INSIDE | 193.558 | 1.598693 | 3.0286881 | 4506 |
| 2.1888225 | 4.5593321 | INSIDE | 631.7067 | 2.031728 | 4.0889431 | 1445 |
| 1.916825 | 3.7759116 | INSIDE | 311.7538 | 1.5051321 | 2.8385066 | 3984 |
| 2.1820972 | 4.5381277 | INSIDE | 183.2377 | 1.6377472 | 3.1117954 | 3604 |
| 1.7991638 | 3.4801845 | INSIDE | 160.16 | | | |
| 1.7418494 | 3.3446364 | INSIDE | 425.2766 | 1.4483474 | 2.7289527 | 1014 |
| 2.0506787 | 4.1430083 | INSIDE | 3187.19 | 1.8431966 | 3.5880416 | 1623 |
| 1.8557836 | 3.6194829 | INSIDE | | | | |
| 1.621837 | 3.0776667 | INSIDE | 730.173 | 1.4161065 | 2.6686433 | 5491 |
| 2.040921 | 4.1150815 | INSIDE | 157.9292 | 2.4660068 | 5.5251238 | 350 |
| 1.9255584 | 3.7988386 | INSIDE | 170.7125 | 1.2867529 | 2.4397831 | 532 |
| 1.9369748 | 3.8290189 | INSIDE | 115.9249 | 1.5692294 | 2.9674617 | 5559 |
| 2.184553 | 4.5458592 | INSIDE | 1457.091 | 2.0348554 | 4.0978166 | 1177 |
| 2.1157017 | 4.3340077 | INSIDE | 430.8128 | 1.557821 | 2.9440884 | 3797 |
| 1.8796141 | 3.6797662 | INSIDE | 177.6919 | 1.9171991 | 3.7768909 | 930 |
| 1.6927829 | 3.232797 | INSIDE | 377.3344 | 1.248184 | 2.3754223 | 1700 |
| 2.2440717 | 4.7373219 | INSIDE | 198.6775 | | | |
| 2.0476048 | 4.1341903 | INSIDE | | | | |
| 2.0444155 | 4.1250611 | INSIDE | 239.8456 | 1.6645288 | 3.170101 | 3922 |
| 1.9020855 | 3.7375309 | INSIDE | 816.0733 | | | |
| 2.125915 | 4.3647983 | INSIDE | 215.3763 | 1.8487644 | 3.6019157 | 155 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.2006595 | 4.5968943 | INSIDE | 205.6377 | 2.5424898 | 5.8259358 | 581 |
| 1.9837654 | 3.9552404 | INSIDE | 404.0708 | 1.4284604 | 2.6915932 | 4519 |
| 1.7855414 | 3.4474781 | INSIDE | 178.0654 | 1.5675503 | 2.96401 | 3995 |
| 1.9047589 | 3.7444632 | INSIDE | 343.9895 | | | |
| 2.1736221 | 4.5115466 | INSIDE | | 1.5467231 | 2.921528 | 3474 |
| 2.2468474 | 4.7464451 | INSIDE | | 2.262083 | 4.7968356 | 386 |
| 2.058979 | 4.1669131 | INSIDE | 699.622 | 1.5515032 | 2.931224 | 4731 |
| 1.6005138 | 3.0325129 | INSIDE | 157.758 | | | |
| 2.2249005 | 4.6747866 | INSIDE | | 1.3051094 | 2.4710246 | 5015 |
| 1.7924078 | 3.4639253 | INSIDE | | 1.6685596 | 3.1789704 | 372 |
| 1.750836 | 3.3655353 | INSIDE | 132.0649 | 1.4422477 | 2.7174391 | 4949 |
| 2.0078647 | 4.0218651 | INSIDE | | 1.6098323 | 3.0521636 | 3344 |
| 1.9568017 | 3.8820043 | INSIDE | | 1.1276592 | 2.1850393 | 2421 |
| 1.7692376 | 3.4087377 | INSIDE | 159.9742 | 1.8317951 | 3.5597973 | 2942 |
| 2.1859767 | 4.5503474 | INSIDE | | 2.1384828 | 4.4029877 | 3122 |
| 2.2691967 | 4.8205465 | INSIDE | 1104.484 | 1.9830487 | 3.9532761 | 4029 |
| 1.8226902 | 3.537402 | INSIDE | 286.0979 | | | |
| 2.6350179 | 6.2118281 | INSIDE | 285.8499 | 2.1675355 | 4.4925529 | 1490 |
| 2.7096903 | 6.541812 | INSIDE | | 1.5916699 | 3.0139801 | 4658 |
| 2.0544674 | 4.1539026 | INSIDE | 570.6758 | | | |
| 1.9503527 | 3.86469 | INSIDE | 319.8612 | 1.9125135 | 3.7646441 | 4304 |
| 1.996883 | 3.9913672 | INSIDE | | 1.8716213 | 3.659436 | 4577 |
| 2.502724 | 5.6675452 | INSIDE | 811.5657 | | | |
| 1.9451909 | 3.8508873 | INSIDE | 135.1519 | 1.5171093 | 2.8621699 | 2734 |
| 1.8241267 | 3.540926 | INSIDE | | 1.3290266 | 2.5123311 | 2368 |
| 2.2236059 | 4.6705935 | INSIDE | 880.9376 | 1.503043 | 2.8343993 | 5266 |
| 1.9451094 | 3.8506698 | INSIDE | | 1.8686144 | 3.6518168 | 2898 |
| 2.4721036 | 5.5485223 | INSIDE | 160.5029 | 2.2943444 | 4.9053103 | 1021 |
| 1.8993872 | 3.730547 | INSIDE | | 1.4455262 | 2.7236214 | 5561 |
| 1.9558511 | 3.8794472 | INSIDE | | | | |
| 2.0651155 | 4.1846748 | INSIDE | 304.8998 | 1.6310538 | 3.0973916 | 5385 |
| 1.7261709 | 3.3084854 | INSIDE | | 1.2623218 | 2.3988148 | 4696 |
| 2.4766665 | 5.5660987 | INSIDE | 404.722 | | | |
| 1.6497308 | 3.1377508 | INSIDE | | 1.5862234 | 3.0026231 | 3907 |
| 1.8926004 | 3.7130388 | INSIDE | 824.9734 | | | |
| 2.4376776 | 5.4176891 | INSIDE | | 1.986409 | 3.9624947 | 4625 |
| 1.6452191 | 3.1279536 | INSIDE | 170.1908 | 1.2080305 | 2.3102204 | 4961 |
| 1.7368989 | 3.3331792 | INSIDE | 1071.002 | 1.9427717 | 3.8444353 | 613 |
| 1.917413 | 3.7774509 | INSIDE | 620.001 | | | |
| 1.7314563 | 3.3206284 | INSIDE | 1192.086 | 1.6554141 | 3.150136 | 2453 |
| 2.0777738 | 4.2215529 | INSIDE | 109.197 | 2.0978045 | 4.2805747 | 1874 |
| 2.1160738 | 4.3351256 | INSIDE | | | | |
| 2.7892678 | 6.9127886 | INSIDE | 163.3249 | 2.2053077 | 4.6117289 | 3636 |
| 2.152623 | 4.4463546 | INSIDE | | 1.4017422 | 2.6422046 | 3369 |
| 2.2872798 | 4.8813487 | INSIDE | | | | |
| 1.9386001 | 3.833335 | INSIDE | 185.6706 | 1.7345693 | 3.3278013 | 2851 |
| 1.6899639 | 3.2264863 | INSIDE | | 1.501711 | 2.8317836 | 5123 |
| 2.169504 | 4.498687 | INSIDE | 162.7463 | 1.8390095 | 3.5776432 | 564 |
| 1.7469532 | 3.3564897 | INSIDE | 131.7764 | | | |
| 2.0048852 | 4.0135676 | INSIDE | 397.519 | 2.0630946 | 4.1788171 | 77 |
| 2.0827923 | 4.2362634 | INSIDE | 279.9139 | 1.9021907 | 3.7378034 | 3211 |
| 2.1700008 | 4.5002364 | INSIDE | | 1.8753451 | 3.6688937 | 292 |
| 1.81991 | 3.5305917 | INSIDE | 200.0945 | 1.8695437 | 3.6541699 | 567 |
| 1.7254235 | 3.3067718 | INSIDE | 2338.896 | 1.2745055 | 2.4191588 | 3965 |
| 1.7484919 | 3.3600714 | INSIDE | 126.909 | 1.3557005 | 2.5592135 | 3072 |
| 1.7289363 | 3.3148333 | INSIDE | 724.9931 | 1.9607524 | 3.8926494 | 1883 |
| 1.7795815 | 3.4332657 | INSIDE | 366.8518 | | | |
| 2.459345 | 5.4996698 | INSIDE | 3530.636 | 1.6283473 | 3.0915863 | 3313 |

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|---|---|---|---|---|---|---|
| 1.6715294 | 3.1855211 | INSIDE | | | | |
| 2.3685853 | 5.1643447 | INSIDE | 250.6891 | | | |
| 2.1814551 | 4.5361083 | INSIDE | 306.5155 | 1.7641996 | 3.3968549 | 1810 |
| 2.1434946 | 4.4183099 | INSIDE | 1696.269 | 1.8844357 | 3.6920848 | 1487 |
| 2.3888493 | 5.2373946 | INSIDE | 2286.926 | 1.5654427 | 2.9596831 | 4331 |
| 1.6657287 | 3.1727387 | INSIDE | 224.6138 | 1.9793037 | 3.9430273 | 1162 |
| 2.074529 | 4.2120688 | INSIDE | | | | |
| 2.0052857 | 4.014682 | INSIDE | 642.7053 | 1.8499566 | 3.6048934 | 2855 |
| 2.118308 | 4.3418443 | INSIDE | 116.8472 | | | |
| 2.1134162 | 4.3271472 | INSIDE | 774.3745 | 1.8262991 | 3.5462619 | 1337 |
| 1.9765861 | 3.9356068 | INSIDE | | 2.0676365 | 4.1919936 | 1596 |
| 1.9062078 | 3.7482256 | INSIDE | 143.6119 | 1.5208431 | 2.869587 | 3495 |
| 1.8888371 | 3.7033659 | INSIDE | 420.504 | | | |
| 1.9688485 | 3.9145555 | INSIDE | 184.8575 | 1.8083439 | 3.5024001 | 2747 |
| 1.8710374 | 3.6579552 | INSIDE | 916.7803 | | | |
| 2.181299 | 4.5356176 | INSIDE | 679.3833 | 1.5364108 | 2.9007195 | 2051 |
| 1.7290767 | 3.3151559 | INSIDE | 155.2352 | 0.9601837 | 1.9455577 | 2507 |
| 2.3224711 | 5.0018823 | INSIDE | | | | |
| 2.1817136 | 4.5369212 | INSIDE | | 1.7953155 | 3.4709137 | 2185 |
| 2.0386531 | 4.1086177 | INSIDE | 666.9847 | 1.6393632 | 3.1152829 | 1230 |
| 2.0835292 | 4.2384278 | INSIDE | 3890.915 | | | |
| 2.1060836 | 4.30521 | INSIDE | 114.1183 | 1.8798212 | 3.6802945 | 4121 |
| 1.8713495 | 3.6587466 | INSIDE | | | | |
| 1.8876746 | 3.700383 | INSIDE | 463.6688 | 1.4179753 | 2.6721024 | 1400 |
| 1.7829933 | 3.4413945 | INSIDE | 412.0452 | 1.6342092 | 3.1041735 | 3518 |
| 1.7392744 | 3.3386721 | INSIDE | 105.1461 | 1.7692686 | 3.408811 | 2478 |
| 2.2002351 | 4.5955422 | INSIDE | 134.8445 | 1.4020997 | 2.6428594 | 5305 |
| 1.7522521 | 3.3688404 | INSIDE | 2043.56 | 1.8585567 | 3.6264468 | 894 |
| 1.7614585 | 3.3904071 | INSIDE | 1497.087 | 1.3738256 | 2.5915686 | 2521 |
| 1.9659916 | 3.9068114 | INSIDE | 212.3592 | | | |
| 2.2567768 | 4.7792254 | INSIDE | 175.9845 | 1.3222643 | 2.5005827 | 2809 |
| 1.9350682 | 3.823962 | INSIDE | 216.1857 | 2.0724263 | 4.2059343 | 772 |
| 1.7575903 | 3.3813288 | INSIDE | | 1.5248013 | 2.8774708 | 4718 |
| 2.1558495 | 4.4563097 | INSIDE | 393.4411 | 1.5854125 | 3.0009359 | 2704 |
| 2.032667 | 4.0916054 | INSIDE | 307.9813 | | | |
| 2.3185818 | 4.9884161 | INSIDE | 464.9849 | 1.3006876 | 2.4634627 | 1606 |
| 1.6821997 | 3.2091689 | INSIDE | 650.0333 | 1.4109831 | 2.6591831 | 4437 |
| 1.892103 | 3.7117589 | INSIDE | | 1.74401 | 3.3496492 | 1718 |
| 2.337626 | 5.0547019 | INSIDE | 1572.531 | 1.8347672 | 3.5671384 | 1025 |
| 2.1129313 | 4.3256931 | INSIDE | 103.7855 | 1.8525273 | 3.6113226 | 4284 |
| 2.2721496 | 4.8304232 | INSIDE | | 1.712368 | 3.2769826 | 5447 |
| 2.0725493 | 4.2062929 | INSIDE | 335.4335 | 2.040116 | 4.112786 | 2390 |
| 1.8114073 | 3.509845 | INSIDE | 346.5105 | 1.9965936 | 3.9905666 | 939 |
| 1.9738369 | 3.9281143 | INSIDE | 67.85761 | | | |
| 2.5075004 | 5.6863401 | INSIDE | 1664.39 | 1.9243368 | 3.7956233 | 82 |
| 1.6540482 | 3.1471549 | INSIDE | 422.8368 | 1.954239 | 3.8751147 | 568 |
| 2.1587708 | 4.4653424 | INSIDE | 121.3036 | | | |
| 1.6637242 | 3.1683335 | INSIDE | | 1.7022736 | 3.2541339 | 3165 |
| 1.9044654 | 3.7437015 | INSIDE | 139.8155 | 1.575458 | 2.9803009 | 1750 |
| 2.1659353 | 4.4875727 | INSIDE | | 1.7736655 | 3.4192158 | 3700 |
| 1.7084324 | 3.2680553 | INSIDE | 200.8973 | 2.2055922 | 4.6126384 | 2834 |
| 2.356506 | 5.1212855 | INSIDE | 1052.196 | | | |
| 1.707038 | 3.2648982 | INSIDE | 775.6517 | | | |
| 2.2183883 | 4.6537325 | INSIDE | 168.3905 | 1.8683522 | 3.6511532 | 439 |
| 2.0309837 | 4.0868342 | INSIDE | | 1.1149572 | 2.1658858 | 5530 |
| 2.381356 | 5.2102623 | INSIDE | | 1.6288489 | 3.0926614 | 4721 |
| 2.2515175 | 4.7618346 | INSIDE | | 1.6667556 | 3.1749978 | 4328 |
| 2.1163628 | 4.3359941 | INSIDE | 366.8137 | 2.1849778 | 4.5471979 | 1683 |

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|---|---|---|---|---|---|---|
| 2.2045708 | 4.6093739 | INSIDE | | 1.6798183 | 3.203876 | 3945 |
| 1.7108682 | 3.2735776 | INSIDE | 711.9032 | 2.235975 | 4.7108095 | 2070 |
| 1.9264351 | 3.8011477 | INSIDE | 227.1916 | 1.8122045 | 3.5117849 | 2326 |
| 2.1172743 | 4.3387345 | INSIDE | 191.2038 | 1.433907 | 2.701774 | 3107 |
| 1.8543761 | 3.6159534 | INSIDE | 2668.964 | 2.0971532 | 4.2786427 | 4314 |
| 2.1470442 | 4.429194 | INSIDE | 279.6591 | 2.2362852 | 4.7118225 | 526 |
| 2.0678656 | 4.1926593 | INSIDE | 200.0849 | 1.684347 | 3.2139489 | 2129 |
| 2.308388 | 4.9532931 | INSIDE | | 1.6435462 | 3.1243286 | 758 |
| 1.7891643 | 3.4561463 | INSIDE | 231.9241 | 1.7189418 | 3.2919486 | 1551 |
| 2.1573157 | 4.4608409 | INSIDE | 679.3914 | 1.8048863 | 3.4940162 | 4421 |
| 1.7337127 | 3.325826 | INSIDE | 275.6118 | | | |
| 2.4693825 | 5.538067 | INSIDE | 164.9426 | 2.0864697 | 4.2470753 | 384 |
| 1.927683 | 3.8044371 | INSIDE | 166.072 | 1.4449886 | 2.7226067 | 1819 |
| 2.3542354 | 5.1132317 | INSIDE | 2028.733 | 1.6737204 | 3.1903626 | 2342 |
| 1.679816 | 3.2038709 | INSIDE | | | | |
| 2.0340872 | 4.0956351 | INSIDE | | 2.045281 | 4.1275366 | 3445 |
| 2.1664162 | 4.4890688 | INSIDE | 163.2765 | | | |
| 1.9246376 | 3.7964147 | INSIDE | | | | |
| 1.9660765 | 3.9070413 | INSIDE | | 1.3863204 | 2.614111 | 5347 |
| 1.9326092 | 3.8174498 | INSIDE | 201.9208 | 1.5911252 | 3.0128424 | 3244 |
| 2.2817426 | 4.8626495 | INSIDE | | 1.7025622 | 3.2547849 | 4752 |
| 1.6656449 | 3.1725544 | INSIDE | 1385.024 | 2.3683589 | 5.1635343 | 2542 |
| 1.69251 | 3.2321855 | INSIDE | 809.0033 | 2.33929 | 5.0605353 | 120 |
| 1.812657 | 3.5128866 | INSIDE | 453.6409 | 1.4671732 | 2.7647963 | 3562 |
| 1.6982758 | 3.2451289 | INSIDE | | | | |
| 2.187769 | 4.556004 | INSIDE | | | | |
| 2.22915 | 4.6885766 | INSIDE | 392.6722 | 1.8718603 | 3.6600422 | 1204 |
| 1.9957088 | 3.9881199 | INSIDE | 288.8434 | 2.0326176 | 4.0914653 | 861 |
| 2.164912 | 4.4843908 | INSIDE | 651.3077 | 2.073543 | 4.2091911 | 72 |
| 1.9536226 | 3.8734594 | INSIDE | 955.9183 | | | |
| 1.8461127 | 3.5953014 | INSIDE | | 1.5809559 | 2.9916801 | 4463 |
| 1.7036484 | 3.2572363 | INSIDE | 178.0003 | 1.7464008 | 3.3552047 | 2013 |
| 1.8511502 | 3.6078771 | INSIDE | 267.0605 | | | |
| 1.9960908 | 3.9891761 | INSIDE | | 2.0169158 | 4.0471766 | 949 |
| 1.942343 | 3.8432931 | INSIDE | | | | |
| 2.793449 | 6.9328522 | INSIDE | | 1.2202066 | 2.3298008 | 3487 |
| 1.9873872 | 3.9651823 | INSIDE | | 1.7237095 | 3.3028455 | 2008 |
| 2.73848 | 6.6736684 | INSIDE | | | | |
| 1.63339 | 3.1024114 | INSIDE | 163.7636 | | | |
| 1.6859722 | 3.2175715 | INSIDE | 1695.398 | 1.8440455 | 3.5901534 | 829 |
| 1.8308533 | 3.5574742 | INSIDE | | 1.260705 | 2.396128 | 4572 |
| 2.1822882 | 4.5387285 | INSIDE | 151.131 | 2.03307 | 4.0927485 | 3142 |
| 1.9411501 | 3.8401166 | INSIDE | 228.4487 | 1.5123746 | 2.8527921 | 4196 |
| 1.9603767 | 3.8916358 | INSIDE | 310.9053 | 1.5618377 | 2.9522967 | 1934 |
| 1.7738755 | 3.4197136 | INSIDE | | 2.055577 | 4.1570987 | 1859 |
| 1.8900276 | 3.7064232 | INSIDE | 184.9458 | 1.8469138 | 3.5972983 | 378 |
| 1.8124138 | 3.5122945 | INSIDE | 294.631 | 1.5707141 | 2.9705171 | 1504 |
| 2.1482239 | 4.4328173 | INSIDE | 106.1298 | 1.7222855 | 3.2995871 | 2242 |
| 1.7454106 | 3.3529027 | INSIDE | 2313.907 | 1.5549806 | 2.9382978 | 1048 |
| 2.389782 | 5.2407816 | INSIDE | 190.1492 | 2.1539016 | 4.4502969 | 4131 |
| 1.6840215 | 3.2132239 | INSIDE | | 2.2555592 | 4.7751935 | 1314 |
| 1.6870528 | 3.2199824 | INSIDE | | 1.361209 | 2.5690038 | 2297 |
| 2.2569942 | 4.7799456 | INSIDE | 261.5612 | | | |
| 1.8633063 | 3.6384054 | INSIDE | 228.2327 | | | |
| 1.7927967 | 3.4648591 | INSIDE | | | | |
| 2.2887373 | 4.8862826 | INSIDE | 266.5108 | | | |
| 2.0846877 | 4.2418326 | INSIDE | 1559.257 | 1.4467801 | 2.7259897 | 3822 |
| 2.3757195 | 5.1899459 | INSIDE | 292.3172 | | | |

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|---|---|---|---|---|---|---|
| 1.8866415 | 3.6977341 | INSIDE | | | | |
| 2.0241184 | 4.0674325 | INSIDE | 253.9749 | | | |
| 1.8679383 | 3.6501058 | INSIDE | 619.4103 | 1.4571587 | 2.7456709 | 1663 |
| 1.8122491 | 3.5118935 | INSIDE | 170.6482 | | | |
| 1.7776772 | 3.4287369 | INSIDE | | 1.57811 | 2.9857844 | 3054 |
| 2.845545 | 7.1877738 | INSIDE | 153.1488 | 2.1104023 | 4.3181169 | 877 |
| 1.9740312 | 3.9286433 | INSIDE | 542.7186 | 1.1241188 | 2.1796837 | 3078 |
| 1.7178203 | 3.2893905 | INSIDE | 196.4385 | | | |
| 2.3553774 | 5.1172808 | INSIDE | 143.046 | 1.385995 | 2.6135214 | 2856 |
| 1.6046501 | 3.0412198 | INSIDE | 356.6617 | 1.8192354 | 3.5289412 | 2121 |
| 1.6424749 | 3.1220094 | INSIDE | 729.6741 | 1.4170631 | 2.6704134 | 2563 |
| 1.9961329 | 3.9892925 | INSIDE | 159.2601 | | | |
| 1.7876712 | 3.4525713 | INSIDE | | | | |
| 1.797119 | 3.4752554 | INSIDE | 576.9213 | 1.3627299 | 2.5717134 | 4694 |
| 2.0406501 | 4.1143089 | INSIDE | | 1.7527947 | 3.3701077 | 1814 |
| 1.6017705 | 3.0351556 | INSIDE | 150.7492 | | | |
| 2.4219484 | 5.3589427 | INSIDE | 4165.437 | 1.5645579 | 2.9578685 | 5605 |
| 2.1633823 | 4.4796385 | INSIDE | 5631.445 | 2.414986 | 5.333143 | 111 |
| 1.9800965 | 3.9451947 | INSIDE | | 1.8118912 | 3.5110224 | 2354 |
| 1.8954861 | 3.7204731 | INSIDE | 136.6052 | | | |
| 1.7023371 | 3.2542771 | INSIDE | | 1.5163536 | 2.860671 | 4842 |
| 1.6888522 | 3.224001 | INSIDE | 510.03 | | | |
| 2.2913775 | 4.8952329 | INSIDE | 797.6722 | 2.0606918 | 4.1718631 | 1185 |
| 2.038662 | 4.1086431 | INSIDE | | 1.7957733 | 3.4720153 | 2224 |
| 1.8155214 | 3.5198682 | INSIDE | 102.1563 | 1.5037408 | 2.8357705 | 4826 |
| 1.7118739 | 3.2758604 | INSIDE | 189.311 | 1.6335326 | 3.102718 | 5207 |
| 2.1822011 | 4.5384545 | INSIDE | 423.6372 | 1.3948809 | 2.6296684 | 2967 |
| 1.6362325 | 3.10853 | INSIDE | | 1.6187419 | 3.0710711 | 2687 |
| 2.0630636 | 4.1787273 | INSIDE | 138.4039 | 1.3897051 | 2.6202511 | 2168 |
| 1.8852545 | 3.6941809 | INSIDE | | 1.5124546 | 2.8529503 | 2941 |
| 1.9330437 | 3.8185997 | INSIDE | 669.9094 | 1.4052529 | 2.6486421 | 1465 |
| 2.0935519 | 4.2679755 | INSIDE | 2112.614 | 2.2661762 | 4.8104645 | 1236 |
| 1.7676579 | 3.4050073 | INSIDE | 2266.03 | 1.1883863 | 2.2789769 | 4762 |
| 2.1011343 | 4.2904658 | INSIDE | | | | |
| 1.917415 | 3.7774561 | INSIDE | | 2.0399625 | 4.1123484 | 405 |
| 1.6774114 | 3.1985353 | INSIDE | 188.0762 | | | |
| 1.8767056 | 3.6723552 | INSIDE | 248.2596 | 1.6093035 | 3.0510451 | 3909 |
| 1.8476843 | 3.59922 | INSIDE | 637.6487 | 1.2492973 | 2.377256 | 4989 |
| 1.9935898 | 3.9822666 | INSIDE | 127.964 | | | |
| 1.9600979 | 3.8908838 | INSIDE | 4225.571 | 2.2074194 | 4.6184841 | 176 |
| 2.313328 | 4.970283 | INSIDE | 1792.069 | 1.679487 | 3.2031403 | 2144 |
| 2.349283 | 5.0957094 | INSIDE | 165.201 | | | |
| 2.3415494 | 5.0684668 | INSIDE | | 2.326723 | 5.0166455 | 2467 |
| 2.1977408 | 4.5876038 | INSIDE | 309.3725 | | | |
| 1.9010065 | 3.7347366 | INSIDE | 172.1743 | 1.538289 | 2.9044983 | 2397 |
| 1.8337011 | 3.5645034 | INSIDE | 321.3856 | | | |
| 1.7972989 | 3.4756888 | INSIDE | 4972.171 | 2.0190408 | 4.0531422 | 191 |
| 2.3278618 | 5.020607 | INSIDE | 162.1158 | 1.8860881 | 3.696316 | 4161 |
| 1.6422815 | 3.1215909 | INSIDE | 852.8898 | 1.4913499 | 2.8115192 | 2381 |
| 2.03092 | 4.0866537 | INSIDE | | 2.1278255 | 4.3705823 | 757 |
| 2.259974 | 4.7898285 | INSIDE | 600.225 | 1.5094901 | 2.8470939 | 3666 |
| 1.7815005 | 3.4378355 | INSIDE | 405.3681 | 1.968293 | 3.9130485 | 1305 |
| 1.7632453 | 3.3946087 | INSIDE | 587.377 | 1.973985 | 3.9285175 | 890 |
| 1.9113247 | 3.7615433 | INSIDE | 208.5558 | | | |
| 1.5932297 | 3.0172405 | INSIDE | | 2.2058032 | 4.6133131 | 1619 |
| 2.1370256 | 4.3985426 | INSIDE | 1230.902 | | | |
| 1.897402 | 3.7254172 | INSIDE | 172.8679 | | | |
| 2.4274313 | 5.3793479 | INSIDE | 159.2262 | 1.8749807 | 3.6679671 | 4676 |

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|---|---|---|---|---|---|---|
| 1.7992525 | 3.4803985 | INSIDE | 167.4805 | 1.6983563 | 3.24531 | 2331 |
| 1.8055766 | 3.4956884 | INSIDE | | | | |
| 1.5954653 | 3.0219196 | INSIDE | | | | |
| 2.0337565 | 4.0946964 | INSIDE | 852.0908 | 1.6296796 | 3.0944427 | 5309 |
| 2.2669637 | 4.813091 | INSIDE | 278.3421 | | | |
| 2.0436025 | 4.1227372 | INSIDE | 369.9521 | 1.3166195 | 2.4908178 | 2940 |
| 1.6919781 | 3.2309941 | INSIDE | 418.321 | 1.4639279 | 2.758584 | 4494 |
| 1.7136272 | 3.279844 | INSIDE | 608.6129 | | | |
| 1.7553573 | 3.3760992 | INSIDE | 244.6276 | 1.4620706 | 2.7550349 | 5417 |
| 1.7038534 | 3.2576992 | INSIDE | 257.8073 | 1.3604999 | 2.5677414 | 1834 |
| 1.8244325 | 3.5416766 | INSIDE | | 1.4596342 | 2.7503862 | 667 |
| 1.8207905 | 3.5327472 | INSIDE | 249.5352 | 1.7883148 | 3.4541118 | 3554 |
| 1.9021678 | 3.7377441 | INSIDE | 346.7353 | | | |
| 1.7184569 | 3.2908423 | INSIDE | | | | |
| 1.9498024 | 3.8632162 | INSIDE | 284.4274 | 1.7058678 | 3.262251 | 1823 |
| 2.014223 | 4.0396296 | INSIDE | 843.6936 | | | |
| 2.3584175 | 5.1280755 | INSIDE | 115.7738 | 1.8013494 | 3.4854608 | 3252 |
| 1.9240917 | 3.7949785 | INSIDE | 226.5066 | 2.4170887 | 5.3409216 | 2846 |
| 1.8801855 | 3.6812239 | INSIDE | 1409.64 | 1.8357557 | 3.5695834 | 3033 |
| 2.0292003 | 4.0817853 | INSIDE | | | | |
| 2.304321 | 4.9393493 | INSIDE | 198.6578 | 1.6902393 | 3.2271023 | 5093 |
| 2.2778325 | 4.8494882 | INSIDE | 197.7122 | 1.5191134 | 2.8661486 | 2871 |
| 1.6587502 | 3.1574288 | INSIDE | | | | |
| 1.6872035 | 3.2203188 | INSIDE | 180.1545 | 1.7833503 | 3.4422462 | 4675 |
| 1.7405707 | 3.3416733 | INSIDE | | 1.6810589 | 3.2066322 | 1831 |
| 1.631269 | 3.0978537 | INSIDE | 71.52058 | 1.330622 | 2.5151109 | 5142 |
| 2.081774 | 4.2332744 | INSIDE | 395.7479 | 1.3544403 | 2.556979 | 2903 |
| 1.6255531 | 3.0856044 | INSIDE | 308.0352 | 2.2689216 | 4.8196273 | 302 |
| 1.6885545 | 3.2233358 | INSIDE | 982.0713 | 1.634207 | 3.1041688 | 4607 |
| 2.00215 | 4.0059655 | INSIDE | | | | |
| 2.373306 | 5.1812708 | INSIDE | 112.8782 | 1.6909479 | 3.2286877 | 5505 |
| 1.9482278 | 3.859002 | INSIDE | | 1.5837123 | 2.9974014 | 3920 |
| 2.2847 | 4.8726277 | INSIDE | 287.028 | 1.3044193 | 2.4698429 | 3526 |
| 2.1269708 | 4.3679938 | INSIDE | 104.5123 | | | |
| 1.8865192 | 3.6974207 | INSIDE | 134.8414 | 2.1826706 | 4.5399317 | 474 |
| 2.3626566 | 5.1431656 | INSIDE | 514.6668 | | | |
| 2.3318422 | 5.034478 | INSIDE | 418.8628 | 1.843145 | 3.5879132 | 4352 |
| 2.604836 | 6.0832235 | INSIDE | 837.9803 | 1.8798198 | 3.6802909 | 3534 |
| 2.1981769 | 4.5889908 | INSIDE | 169.1221 | 1.1880237 | 2.2784042 | 4928 |
| 2.3332436 | 5.0393707 | INSIDE | 367.8073 | 1.2623407 | 2.3988463 | 1943 |
| 1.9029443 | 3.7397564 | INSIDE | 340.4123 | 1.7308073 | 3.319135 | 3204 |
| 1.8623221 | 3.6359241 | INSIDE | 627.604 | 1.195395 | 2.2900752 | 1296 |
| 1.6343118 | 3.1043943 | INSIDE | 162.8882 | 1.458176 | 2.7476076 | 841 |
| 1.8915973 | 3.7104581 | INSIDE | 176.3427 | 1.4952354 | 2.8191015 | 4920 |
| 1.7563326 | 3.3783823 | INSIDE | 1691.776 | 1.7613245 | 3.3900922 | 2276 |
| 1.7876275 | 3.4524667 | INSIDE | 757.279 | 2.027741 | 4.0776586 | 3451 |
| 2.3448014 | 5.0799046 | INSIDE | 1019.109 | 2.1630063 | 4.4784711 | 694 |
| 2.0295167 | 4.0826806 | INSIDE | 305.8126 | 1.7021579 | 3.2538729 | 2632 |
| 2.0606568 | 4.1717618 | INSIDE | 292.5749 | 1.3118005 | 2.4825117 | 3282 |
| 1.7333744 | 3.3250462 | INSIDE | | 1.2584606 | 2.3924033 | 3406 |
| 2.2247624 | 4.6743391 | INSIDE | | 1.6949763 | 3.2377157 | 2969 |
| 1.9518028 | 3.8685765 | INSIDE | 114.0285 | | | |
| 2.4488938 | 5.4599729 | INSIDE | 258.8715 | 1.7701292 | 3.410845 | 2930 |
| 1.6428531 | 3.122828 | INSIDE | | | | |
| 2.059839 | 4.1693977 | INSIDE | | 1.7539731 | 3.3728616 | 2495 |
| 1.706622 | 3.2639569 | INSIDE | | 1.3814893 | 2.6053719 | 1471 |
| 1.7393469 | 3.3388399 | INSIDE | 381.552 | 1.5501357 | 2.9284468 | 2255 |
| 1.734138 | 3.3268066 | INSIDE | 174.9322 | 2.246599 | 4.745628 | 1291 |

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|---|---|---|---|---|---|---|
| 2.1440418 | 4.419986 | INSIDE | 164.3007 | 1.5068387 | 2.8418663 | 1963 |
| 1.7676593 | 3.4050106 | INSIDE | 175.3708 | 1.1177086 | 2.1700204 | 4781 |
| 1.9861195 | 3.9616996 | INSIDE | | | | |
| 2.1671154 | 4.4912449 | INSIDE | | 1.6068424 | 3.0458447 | 2151 |
| 2.0565207 | 4.1598188 | INSIDE | | | | |
| 1.7990085 | 3.4798099 | INSIDE | | 1.728719 | 3.314334 | 817 |
| 2.0320387 | 4.0898238 | INSIDE | 845.1851 | 1.4459194 | 2.7243639 | 3303 |
| 2.0237339 | 4.0663486 | INSIDE | | 2.0257592 | 4.0720611 | 629 |
| 1.7507262 | 3.3652792 | INSIDE | | | | |
| 1.6896105 | 3.225696 | INSIDE | | 1.5653623 | 2.9595181 | 2035 |
| 2.2717395 | 4.8290503 | INSIDE | 146.4716 | | | |
| 2.1509888 | 4.4413209 | INSIDE | 154.98 | 1.5507125 | 2.9296179 | 4187 |
| 1.8241044 | 3.5408713 | INSIDE | 236.9384 | 1.9986202 | 3.9961762 | 1768 |
| 2.0232797 | 4.0650686 | INSIDE | 713.6517 | 1.6362501 | 3.1085679 | 4484 |
| 2.2796934 | 4.8557475 | INSIDE | 152.8086 | 1.646869 | 3.1315328 | 2510 |
| 1.6683317 | 3.1784683 | INSIDE | 184.3124 | | | |
| 2.2175057 | 4.6508864 | INSIDE | 167.9781 | 1.6904069 | 3.2274772 | 1179 |
| 2.107518 | 4.3094926 | INSIDE | 431.3885 | | | |
| 2.2772124 | 4.8474042 | INSIDE | | | | |
| 1.7549468 | 3.3751387 | INSIDE | 296.0605 | 2.3742728 | 5.1847442 | 1800 |
| 1.9858989 | 3.9610939 | INSIDE | 158.458 | 1.8564397 | 3.6211293 | 510 |
| 1.6781871 | 3.2002555 | INSIDE | 1614.637 | 1.4023912 | 2.6433935 | 5389 |
| 2.3745105 | 5.1855985 | INSIDE | 330.754 | 1.4326799 | 2.699477 | 666 |
| 1.7118473 | 3.2758001 | INSIDE | 156.8714 | | | |
| 2.2508461 | 4.759619 | INSIDE | 128.0118 | 1.4441279 | 2.7209829 | 3373 |
| 1.8634492 | 3.6387658 | INSIDE | 1177.542 | 1.3534856 | 2.5552875 | 3669 |
| 1.8598179 | 3.6296185 | INSIDE | 183.1086 | 1.3014133 | 2.4647021 | 4078 |
| 2.319198 | 4.9905472 | INSIDE | 141.0006 | | | |
| 1.8157429 | 3.5204086 | INSIDE | 371.8073 | 1.8409904 | 3.5825588 | 2977 |
| 2.0523105 | 4.147697 | INSIDE | 225.7301 | 2.6906111 | 6.4558681 | 1198 |
| 2.2606936 | 4.7922182 | INSIDE | 222.4426 | | | |
| 1.8164202 | 3.5220617 | INSIDE | 173.1526 | 1.2400876 | 2.3621287 | 3997 |
| 1.997357 | 3.9926788 | INSIDE | 261.3257 | 1.7669228 | 3.4032728 | 2512 |
| 2.141097 | 4.4109732 | INSIDE | 207.0694 | | | |
| 1.9900002 | 3.9723705 | INSIDE | | | | |
| 1.9066454 | 3.7493627 | INSIDE | 1299.531 | 1.9083761 | 3.7538633 | 244 |
| 2.076283 | 4.2171929 | INSIDE | 4865.875 | | | |
| 2.0320072 | 4.0897345 | INSIDE | 229.243 | 1.3203156 | 2.4972073 | 4226 |
| 2.2973893 | 4.9156742 | INSIDE | 169.0238 | 1.7366471 | 3.3325975 | 1984 |
| 2.2700965 | 4.8235539 | INSIDE | | 1.2450197 | 2.3702179 | 5274 |
| 2.3476264 | 5.0898615 | INSIDE | 332.5655 | 1.6246846 | 3.0837474 | 1712 |
| 1.8809097 | 3.6830723 | INSIDE | 1089.982 | 1.4432092 | 2.7192508 | 2816 |
| 3.3823774 | 10.427905 | INSIDE | | 1.8910319 | 3.7090042 | 1731 |
| 1.9251951 | 3.797882 | INSIDE | 1158.548 | 1.9198291 | 3.7837823 | 5463 |
| 2.0118997 | 4.0331294 | INSIDE | 645.5713 | 1.6615713 | 3.163609 | 2676 |
| 2.1034303 | 4.2972994 | INSIDE | 119.935 | 1.6709081 | 3.1841496 | 4406 |
| 2.199325 | 4.5926441 | INSIDE | 342.9402 | 1.8299259 | 3.5551881 | 2041 |
| 2.0421832 | 4.1186833 | INSIDE | 2570.636 | 1.5653346 | 2.9594613 | 4648 |
| 2.1332107 | 4.386927 | INSIDE | 648.5577 | 1.6968194 | 3.2418546 | 1649 |
| 1.8060503 | 3.4968364 | INSIDE | 1596.122 | 1.9518255 | 3.8686374 | 3450 |
| 2.0427573 | 4.1203226 | INSIDE | 186.0098 | 1.5906409 | 3.0118312 | 1670 |
| 1.9754826 | 3.9325977 | INSIDE | | 1.6284589 | 3.0918255 | 4500 |
| 2.1144965 | 4.3303886 | INSIDE | 243.7691 | 1.8753817 | 3.6689868 | 3281 |
| 2.410906 | 5.3180819 | INSIDE | | 1.3678275 | 2.5808164 | 4461 |
| 1.7897794 | 3.4576202 | INSIDE | 139.1112 | | | |
| 1.8935223 | 3.7154123 | INSIDE | 703.1829 | 1.6097432 | 3.0519751 | 2319 |
| 1.9654484 | 3.9053407 | INSIDE | | | | |
| 2.7949371 | 6.9400069 | INSIDE | 369.4848 | 1.8660148 | 3.6452425 | 4241 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.8121754 | 3.5117141 | INSIDE | | 2.1081562 | 4.3113993 | 1942 |
| 1.6726427 | 3.1879803 | INSIDE | 3032.249 | 1.8614807 | 3.6338042 | 566 |
| 2.031755 | 4.0890197 | INSIDE | 120.6587 | 1.7404681 | 3.3414357 | 2432 |
| 2.5049937 | 5.6764686 | INSIDE | 138.3255 | 2.0707707 | 4.2011104 | 4019 |
| 2.0246212 | 4.0688503 | INSIDE | 838.9918 | 1.3856806 | 2.612952 | 2247 |
| 1.6758181 | 3.1950048 | INSIDE | 191.136 | | | |
| 1.5955477 | 3.0220923 | INSIDE | 325.3447 | 1.5694448 | 2.9679048 | 2569 |
| 1.743713 | 3.3489597 | INSIDE | | | | |
| 1.7150797 | 3.2831478 | INSIDE | 139.9077 | 0.9659408 | 1.9533369 | 4787 |
| 2.2664623 | 4.8114185 | INSIDE | 922.9667 | | | |
| 1.7518766 | 3.3679637 | INSIDE | | 1.8312706 | 3.5585034 | 5290 |
| 1.9827998 | 3.9525941 | INSIDE | | 1.9222498 | 3.7901365 | 3573 |
| 2.0433428 | 4.1219951 | INSIDE | | | | |
| 2.2289102 | 4.6877973 | INSIDE | | | | |
| 2.184693 | 4.5463004 | INSIDE | 1589.273 | 1.8276997 | 3.5497064 | 1478 |
| 1.8435949 | 3.5890323 | INSIDE | 1805.318 | 1.7135661 | 3.2797051 | 1013 |
| 2.1362386 | 4.3961439 | INSIDE | 237.7203 | 1.268076 | 2.4084016 | 3063 |
| 2.158912 | 4.4657794 | INSIDE | 759.3989 | 1.4224918 | 2.6804808 | 1525 |
| 1.8994797 | 3.7307862 | INSIDE | 168.0326 | 1.7412782 | 3.3433125 | 3435 |
| 2.036087 | 4.1013163 | INSIDE | | 1.8321383 | 3.5606442 | 268 |
| 2.139714 | 4.4067468 | INSIDE | 185.9173 | 1.2321213 | 2.3491214 | 2437 |
| 2.0525877 | 4.148494 | INSIDE | 109.2287 | 1.3817025 | 2.6057569 | 5226 |
| 1.9626654 | 3.8978144 | INSIDE | | 1.5365124 | 2.9009238 | 2174 |
| 1.7150369 | 3.2830504 | INSIDE | 1421.617 | 1.7813375 | 3.4374471 | 3417 |
| 1.8592036 | 3.6280733 | INSIDE | 168.9544 | 1.4145272 | 2.6657236 | 3814 |
| 1.812428 | 3.512329 | INSIDE | 726.4178 | | | |
| 1.6365 | 3.1091064 | INSIDE | 368.14 | | | |
| 2.0934026 | 4.2675339 | INSIDE | 205.9442 | | | |
| 1.9767603 | 3.9360821 | INSIDE | 247.3646 | | | |
| 1.681399 | 3.2073882 | INSIDE | 472.7499 | | | |
| 1.6549916 | 3.1492136 | INSIDE | 709.7371 | 1.1510974 | 2.2208276 | 5590 |
| 1.8912841 | 3.7096526 | INSIDE | 2968.661 | | | |
| 2.052294 | 4.1476495 | INSIDE | 627.3303 | 2.173859 | 4.5122875 | 1937 |
| 2.1314218 | 4.3814907 | INSIDE | 225.0816 | | | |
| 2.040393 | 4.1135757 | INSIDE | 134.8331 | | | |
| 1.7169942 | 3.2875075 | INSIDE | 342.9594 | 1.6900582 | 3.2266972 | 1742 |
| 1.6576415 | 3.1550033 | INSIDE | 974.9503 | 1.7815874 | 3.4380425 | 1805 |
| 1.8003883 | 3.4831396 | INSIDE | 1775.583 | 1.8938588 | 3.716279 | 427 |
| 2.040098 | 4.1127347 | INSIDE | | | | |
| 1.9545339 | 3.8759069 | INSIDE | 144.4005 | 1.3933312 | 2.6268452 | 5333 |
| 2.1910262 | 4.5663018 | INSIDE | 313.9377 | 1.7803247 | 3.4350348 | 740 |
| 2.013671 | 4.0380842 | INSIDE | 189.3783 | 2.2832882 | 4.8678618 | 762 |
| 2.0805645 | 4.2297269 | INSIDE | 1317.471 | | | |
| 2.0625372 | 4.1772028 | INSIDE | | 1.7944237 | 3.4687688 | 3980 |
| 2.211655 | 4.6320634 | INSIDE | 1143.384 | 2.1059155 | 4.3047084 | 5370 |
| 1.9589134 | 3.8876906 | INSIDE | | 1.3215605 | 2.4993631 | 4697 |
| 2.6121197 | 6.1140133 | INSIDE | 104.1756 | | | |
| 1.9030254 | 3.7399666 | INSIDE | | 1.2997689 | 2.4618944 | 5537 |
| 1.9618316 | 3.8955623 | INSIDE | 504.1552 | | | |
| 1.7621028 | 3.3919215 | INSIDE | 170.9677 | | | |
| 1.6004632 | 3.0324066 | INSIDE | 156.4675 | | | |
| 1.9678715 | 3.9119054 | INSIDE | | 1.4882425 | 2.80547 | 3662 |
| 2.4631937 | 5.5143609 | INSIDE | 319.2354 | 2.0487487 | 4.1374696 | 3783 |
| 1.8599494 | 3.6299493 | INSIDE | 1132.855 | 1.8733581 | 3.6638441 | 4834 |
| 1.7777357 | 3.4288759 | INSIDE | | 1.5098817 | 2.8478669 | 4179 |
| 1.8445235 | 3.5913431 | INSIDE | 2101.196 | 1.673981 | 3.1909389 | 624 |
| 1.6150695 | 3.0632636 | INSIDE | 331.8281 | 1.7981831 | 3.4778196 | 4075 |
| 1.5873784 | 3.0050279 | INSIDE | 531.9653 | 1.3354456 | 2.5235341 | 2093 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.765574 | 3.4000925 | INSIDE | 2480.891 | 1.5833486 | 2.9966459 | 4720 |
| 2.1207957 | 4.3493376 | INSIDE | | 2.605778 | 6.0871968 | 4454 |
| 1.9293581 | 3.8088569 | INSIDE | 196.6942 | 1.6307622 | 3.0967656 | 3915 |
| 1.6301554 | 3.0954634 | INSIDE | 171.4199 | 1.3830166 | 2.6081315 | 2768 |
| 2.6136553 | 6.1205245 | INSIDE | | | | |
| 1.7674282 | 3.4044652 | INSIDE | | 1.2389714 | 2.3603019 | 3619 |
| 1.9953604 | 3.987157 | INSIDE | 202.0945 | 1.799854 | 3.4818499 | 3329 |
| 2.378895 | 5.201382 | INSIDE | 338.0685 | | | |
| 2.0596669 | 4.1689004 | INSIDE | | 1.7907718 | 3.4599994 | 3609 |
| 1.7215674 | 3.2979451 | INSIDE | 131.546 | 1.4400992 | 2.7133952 | 3395 |
| 1.9839709 | 3.9558039 | INSIDE | | 1.7039822 | 3.2579901 | 705 |
| 1.7646512 | 3.3979184 | INSIDE | 135.8783 | 1.8098825 | 3.5061373 | 5050 |
| 2.257652 | 4.7821255 | INSIDE | 161.5498 | 2.1406872 | 4.4097204 | 2459 |
| 1.9838623 | 3.9555061 | INSIDE | 686.4504 | | | |
| 2.1520143 | 4.444479 | INSIDE | 489.989 | 1.6198959 | 3.0735286 | 4052 |
| 1.7754346 | 3.4234112 | INSIDE | 242.3165 | 1.878452 | 3.6768033 | 4215 |
| 2.1993897 | 4.5928501 | INSIDE | | 1.3711016 | 2.58668 | 1509 |
| 2.213277 | 4.6372741 | INSIDE | 245.944 | | | |
| 2.1642241 | 4.4822531 | INSIDE | 609.6368 | 1.5120096 | 2.8520704 | 1087 |
| 2.3236725 | 5.0060493 | INSIDE | 292.8849 | 1.5905226 | 3.0115842 | 3776 |
| 1.6767737 | 3.1971218 | INSIDE | 990.2904 | | | |
| 2.075395 | 4.2145979 | INSIDE | 214.5767 | 1.7340828 | 3.3266793 | 5140 |
| 2.567179 | 5.9264945 | INSIDE | 772.0458 | | | |
| 1.8657565 | 3.6445899 | INSIDE | 1284.211 | | | |
| 2.233138 | 4.701555 | INSIDE | 153.6461 | 1.5662334 | 2.9613056 | 1364 |
| 1.9765865 | 3.9356079 | INSIDE | | | | |
| 2.0060437 | 4.0167918 | INSIDE | 128.6525 | 1.761284 | 3.389997 | 2007 |
| 2.0591867 | 4.167513 | INSIDE | 333.994 | | | |
| 1.7852824 | 3.4468593 | INSIDE | 213.1047 | 1.4336612 | 2.7013137 | 972 |
| 1.8732117 | 3.6634723 | INSIDE | | 1.5354781 | 2.8988448 | 3853 |
| 2.8450084 | 7.1851008 | INSIDE | | | | |
| 2.3941548 | 5.2566905 | INSIDE | | 2.3051348 | 4.9421363 | 716 |
| 1.9291527 | 3.8083147 | INSIDE | | 1.5369364 | 2.9017765 | 3866 |
| 2.0411782 | 4.1158152 | INSIDE | | | | |
| 2.805047 | 6.9888108 | INSIDE | | 1.3277565 | 2.5101203 | 3625 |
| 1.6398497 | 3.1163336 | INSIDE | 233.0337 | 1.850789 | 3.6069739 | 2693 |
| 2.002973 | 4.0082514 | INSIDE | 266.5231 | 1.9124384 | 3.7644482 | 2353 |
| 1.6574951 | 3.1546831 | INSIDE | 170.1555 | 1.1276529 | 2.1850297 | 1779 |
| 1.6791213 | 3.2023285 | INSIDE | 759.769 | 1.6530185 | 3.1449095 | 277 |
| 1.946767 | 3.8550966 | INSIDE | 855.8549 | 1.6547749 | 3.1487406 | 2016 |
| 1.7733911 | 3.4185656 | INSIDE | 111.1457 | | | |
| 2.5616417 | 5.9037912 | INSIDE | 189.5943 | | | |
| 1.9577589 | 3.8845807 | INSIDE | 488.7419 | 1.8226858 | 3.5373913 | 3135 |
| 1.9685823 | 3.9138333 | INSIDE | 1102.796 | | | |
| 1.8941191 | 3.7169495 | INSIDE | 209.5724 | | | |
| 1.9180727 | 3.7791786 | INSIDE | 229.7912 | 1.8473876 | 3.5984799 | 5424 |
| 1.6735113 | 3.1899002 | INSIDE | 992.1316 | 1.1742527 | 2.2567595 | 3266 |
| 1.9123194 | 3.7641377 | INSIDE | 887.149 | 2.1452813 | 4.4237851 | 3729 |
| 2.264179 | 4.8038097 | INSIDE | 1068.479 | | | |
| 1.6294079 | 3.09386 | INSIDE | 106.8842 | 1.9476426 | 3.857437 | 2234 |
| 1.6150882 | 3.0633033 | INSIDE | | | | |
| 1.6913289 | 3.2295405 | INSIDE | 641.2416 | | | |
| 1.8428503 | 3.5871804 | INSIDE | | 1.0342945 | 2.0481118 | 4545 |
| 2.2167218 | 4.64836 | INSIDE | | 2.3129601 | 4.9690157 | 1051 |
| 2.2995765 | 4.9231323 | INSIDE | 467.925 | 1.7035271 | 3.2569625 | 1516 |
| 2.0130756 | 4.036418 | INSIDE | 204.7846 | 2.1392286 | 4.4052644 | 593 |
| 1.833796 | 3.5647379 | INSIDE | 187.9487 | 2.2057912 | 4.6132747 | 621 |
| 1.6195434 | 3.0727777 | INSIDE | 424.0465 | 2.0271945 | 4.0761143 | 1332 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.6638887 | 3.1686948 | INSIDE | 241.3012 | | | |
| 1.8679639 | 3.6501706 | INSIDE | | | | |
| 1.5884149 | 3.0071877 | INSIDE | 246.2572 | | | |
| 2.2181041 | 4.6528159 | INSIDE | 126.1995 | | | |
| 2.200597 | 4.5966952 | INSIDE | 208.3641 | 1.5730017 | 2.975231 | 4817 |
| 2.7867773 | 6.9008654 | INSIDE | 243.5632 | 1.9222848 | 3.7902284 | 2252 |
| 1.7396811 | 3.3396134 | INSIDE | 161.1965 | 1.5231903 | 2.8742595 | 2011 |
| 1.8799348 | 3.6805843 | INSIDE | 449.3242 | 1.7467598 | 3.3560397 | 2498 |
| 1.63568 | 3.1073398 | INSIDE | 916.6396 | 2.1285222 | 4.3726934 | 4508 |
| 2.2858171 | 4.8764021 | INSIDE | 202.0059 | 1.8855222 | 3.6948664 | 2735 |
| 1.6238486 | 3.081961 | INSIDE | 301.0675 | 1.5650765 | 2.9589319 | 3694 |
| 1.6661125 | 3.1735828 | INSIDE | 2573.853 | 1.701144 | 3.2515869 | 2597 |
| 2.430551 | 5.3909929 | INSIDE | 673.3666 | | | |
| 2.1990643 | 4.5918143 | INSIDE | 3165.276 | 2.0198445 | 4.0554008 | 2246 |
| 1.6894464 | 3.2253292 | INSIDE | 411.6396 | 2.1751978 | 4.5164768 | 126 |
| 1.6325125 | 3.100525 | INSIDE | 307.946 | 1.8082361 | 3.5021384 | 615 |
| 2.3813891 | 5.2103818 | INSIDE | 478.9567 | 2.2927933 | 4.9000392 | 2637 |
| 1.6055369 | 3.0430898 | INSIDE | 213.9621 | 1.5090456 | 2.8462169 | 5083 |
| 2.2584965 | 4.7849256 | INSIDE | 779.8654 | 2.1323078 | 4.3841823 | 1127 |
| 1.6406908 | 3.118151 | INSIDE | | | | |
| 2.0278816 | 4.078056 | INSIDE | 852.1093 | 1.8337193 | 3.5645484 | 2916 |
| 1.8063291 | 3.4975122 | INSIDE | 288.4742 | 1.3618631 | 2.5701688 | 3630 |
| 2.035308 | 4.0991023 | INSIDE | 565.2824 | 1.454452 | 2.7405244 | 3233 |
| 1.6166407 | 3.0666015 | INSIDE | | | | |
| 1.6202002 | 3.0741769 | INSIDE | 253.5267 | 1.8602583 | 3.6307266 | 833 |
| 1.9663594 | 3.9078075 | INSIDE | 793.6665 | 0.8425766 | 1.79325 | 5584 |
| 1.7060324 | 3.2626232 | INSIDE | 546.0318 | 1.3892576 | 2.6194385 | 1707 |
| 1.8019475 | 3.4869061 | INSIDE | 112.3344 | 1.7832224 | 3.4419411 | 3916 |
| 1.7183936 | 3.2906979 | INSIDE | 1301.742 | 2.3930178 | 5.2525493 | 45 |
| 1.9818845 | 3.9500872 | INSIDE | 1000.024 | 2.0141034 | 4.0392947 | 237 |
| 2.5963786 | 6.0476666 | INSIDE | 367.5394 | 1.5252943 | 2.8784543 | 2949 |
| 2.319836 | 4.9927546 | INSIDE | 435.2859 | 2.0182137 | 4.0508192 | 781 |
| 2.1898274 | 4.562509 | INSIDE | 389.2078 | 2.0931597 | 4.2668154 | 86 |
| 1.7931962 | 3.4658187 | INSIDE | 517.7772 | 1.1427656 | 2.2080389 | 3725 |
| 1.5851412 | 3.0003716 | INSIDE | 143.9195 | | | |
| 1.8930105 | 3.7140944 | INSIDE | | 1.7476821 | 3.3581859 | 1328 |
| 1.7495058 | 3.3624337 | INSIDE | 240.5878 | 2.0286367 | 4.080191 | 628 |
| 2.149538 | 4.4368568 | INSIDE | | 1.7446126 | 3.3510486 | 2836 |
| 2.2088628 | 4.6231071 | INSIDE | | 1.7551855 | 3.3756972 | 5282 |
| 1.6828651 | 3.2106493 | INSIDE | 2211.014 | 1.7381963 | 3.3361781 | 1491 |
| 2.090779 | 4.2597802 | INSIDE | 347.6294 | 1.7663231 | 3.4018584 | 991 |
| 1.8513738 | 3.6084363 | INSIDE | 551.6924 | 1.9737548 | 3.9278907 | 987 |
| 1.9995528 | 3.9987603 | INSIDE | 1895.959 | 2.177903 | 4.5249536 | 2434 |
| 2.448447 | 5.4582823 | INSIDE | | 2.2895818 | 4.8891437 | 3009 |
| 1.650112 | 3.13858 | INSIDE | 261.4174 | 1.4917282 | 2.8122565 | 4026 |
| 1.8211292 | 3.5335766 | INSIDE | | | | |
| 2.1464775 | 4.4274546 | INSIDE | 147.5605 | 1.3774129 | 2.5980207 | 3358 |
| 2.113828 | 4.3283825 | INSIDE | 259.8615 | | | |
| 1.6527046 | 3.1442253 | INSIDE | | | | |
| 1.7663044 | 3.4018143 | INSIDE | 401.5426 | 2.1540313 | 4.450697 | 205 |
| 2.2949278 | 4.9072943 | INSIDE | 107.8664 | 1.2321758 | 2.3492102 | 4639 |
| 1.698668 | 3.2460113 | INSIDE | 253.1422 | 1.658336 | 3.1565224 | 1589 |
| 1.9477538 | 3.8577343 | INSIDE | 143.352 | 1.8947908 | 3.7186805 | 3815 |
| 1.7174381 | 3.2885192 | INSIDE | 242.8143 | | | |
| 1.7866503 | 3.450129 | INSIDE | 314.0004 | 1.8885581 | 3.7026498 | 2346 |
| 2.0351572 | 4.0986739 | INSIDE | 250.4152 | 1.5275766 | 2.8830115 | 1740 |
| 1.8077983 | 3.5010758 | INSIDE | 851.1107 | | | |
| 2.109471 | 4.3153303 | INSIDE | 85.76307 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.767125 | 3.4037498 | INSIDE | 156.6972 | 1.4859298 | 2.8009763 | 4191 |
| 1.7651842 | 3.399174 | INSIDE | | 1.5166038 | 2.8611672 | 2923 |
| 1.7137917 | 3.280218 | INSIDE | 177.5241 | 1.8799034 | 3.6805042 | 644 |
| 1.5912787 | 3.013163 | INSIDE | | 2.4066792 | 5.3025238 | 1440 |
| 1.7597361 | 3.3863618 | INSIDE | | | | |
| 1.7561809 | 3.3780271 | INSIDE | | 1.4658604 | 2.7622816 | 2723 |
| 1.7023677 | 3.2543461 | INSIDE | 182.9539 | 1.8851976 | 3.6940352 | 1163 |
| 1.5924217 | 3.0155511 | INSIDE | | 1.2646135 | 2.4026283 | 2189 |
| 1.6933572 | 3.2340841 | INSIDE | | 1.6886672 | 3.2235876 | 3939 |
| 2.1195288 | 4.3455199 | INSIDE | 4213.919 | 2.023966 | 4.0670028 | 754 |
| 1.7269349 | 3.3102379 | INSIDE | 112.3591 | 1.4510628 | 2.7340939 | 610 |
| 1.9760367 | 3.9341084 | INSIDE | | | | |
| 1.9085903 | 3.7544206 | INSIDE | 216.4131 | 1.4614033 | 2.7537609 | 4322 |
| 1.6442684 | 3.125893 | INSIDE | 173.8222 | | | |
| 1.7898722 | 3.4578426 | INSIDE | 151.1659 | | | |
| 2.118641 | 4.3428466 | INSIDE | 165.7738 | 2.1197097 | 4.3460648 | 1329 |
| 2.2149293 | 4.6425881 | INSIDE | 315.386 | 1.1085368 | 2.1562684 | 4722 |
| 1.9268165 | 3.8021528 | INSIDE | | 1.9618287 | 3.8955545 | 923 |
| 1.6795473 | 3.2032742 | INSIDE | 328.706 | | | |
| 1.652225 | 3.1431802 | INSIDE | 111.3231 | 1.4880801 | 2.8051542 | 4310 |
| 2.4407856 | 5.429373 | INSIDE | 198.3164 | 1.7663915 | 3.4020197 | 1357 |
| 1.97861 | 3.9411318 | INSIDE | 433.2698 | 2.0225248 | 4.0629421 | 2492 |
| 2.0439453 | 4.1237169 | INSIDE | 224.7394 | 1.7869438 | 3.4508309 | 946 |
| 1.7633231 | 3.3947918 | INSIDE | 216.946 | 1.4951519 | 2.8189383 | 3610 |
| 2.2487147 | 4.7525925 | INSIDE | 163.2439 | | | |
| 1.675143 | 3.1935101 | INSIDE | 179.6261 | 1.4004197 | 2.6397837 | 1701 |
| 2.173305 | 4.5105551 | INSIDE | 131.8579 | 1.7451434 | 3.3522817 | 2854 |
| 2.01449 | 4.0403772 | INSIDE | | | | |
| 2.3526433 | 5.1075921 | INSIDE | 352.9975 | 1.2793869 | 2.427358 | 5040 |
| 1.5884582 | 3.0072779 | INSIDE | 112.5237 | | | |
| 1.9263146 | 3.8008303 | INSIDE | | 1.9835758 | 3.9547207 | 3552 |
| 1.7780298 | 3.429575 | INSIDE | | 1.5635924 | 2.9558896 | 2550 |
| 1.9310977 | 3.8134524 | INSIDE | 91.75427 | | | |
| 2.6458 | 6.2584266 | INSIDE | | 1.8047463 | 3.4936772 | 5251 |
| 1.673979 | 3.1909345 | INSIDE | 196.8354 | | | |
| 1.6430662 | 3.1232893 | INSIDE | 151.4347 | | | |
| 1.8385668 | 3.5765455 | INSIDE | 632.7335 | | | |
| 2.1564093 | 4.4580392 | INSIDE | 214.0159 | 1.9092195 | 3.7560584 | 4541 |
| 1.6763952 | 3.1962831 | INSIDE | | | | |
| 2.2257738 | 4.6776172 | INSIDE | 253.3169 | 1.400797 | 2.6404741 | 3066 |
| 1.7559743 | 3.3775434 | INSIDE | | 1.2012589 | 2.2994023 | 3809 |
| 1.972157 | 3.923543 | INSIDE | 443.1378 | 1.5128869 | 2.8538053 | 3975 |
| 1.5858368 | 3.0018186 | INSIDE | | | | |
| 1.7320328 | 3.3219556 | INSIDE | 397.5156 | 2.0153577 | 4.042808 | 583 |
| 2.2456956 | 4.7426572 | INSIDE | 249.5599 | 1.840773 | 3.582019 | 5546 |
| 1.7075546 | 3.2660675 | INSIDE | 123.8395 | | | |
| 1.8384066 | 3.5761484 | INSIDE | 152.4416 | 1.5232558 | 2.87439 | 4112 |
| 2.0003443 | 4.0009547 | INSIDE | 318.529 | 1.5543343 | 2.9369817 | 5498 |
| 1.9342265 | 3.8217317 | INSIDE | 967.3002 | | | |
| 1.8327206 | 3.5620817 | INSIDE | | | | |
| 2.639414 | 6.2307853 | INSIDE | 968.0058 | | | |
| 1.6942215 | 3.2360222 | INSIDE | | 2.1545532 | 4.4523074 | 1238 |
| 1.7375305 | 3.3346388 | INSIDE | | | | |
| 2.0843244 | 4.2407646 | INSIDE | 125.8572 | | | |
| 1.8756886 | 3.6697673 | INSIDE | 177.6067 | 1.6987705 | 3.2462419 | 2162 |
| 1.8735993 | 3.6644567 | INSIDE | 141.3877 | 1.8344028 | 3.5662375 | 5418 |
| 1.8041226 | 3.4921671 | INSIDE | 253.2566 | | | |
| 1.8615235 | 3.633912 | INSIDE | 172.5592 | 2.032861 | 4.0921556 | 2640 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.5851879 | 3.0004687 | INSIDE | 242.0267 | 1.2390451 | 2.3604225 | 1605 |
| 1.6178426 | 3.0691573 | INSIDE | 256.8883 | 1.4159992 | 2.6684449 | 4870 |
| 2.0481448 | 4.135738 | INSIDE | 309.4052 | | | |
| 1.8651985 | 3.6431806 | INSIDE | 564.8278 | 1.4157851 | 2.6680489 | 1771 |
| 1.6619207 | 3.1643753 | INSIDE | 135.204 | 2.0733533 | 4.2086376 | 5156 |
| 2.029127 | 4.0815779 | INSIDE | 117.9447 | | | |
| 2.007808 | 4.0217071 | INSIDE | 3629.243 | | | |
| 2.2044718 | 4.6090576 | INSIDE | 207.3051 | 1.5951095 | 3.0211745 | 3149 |
| 1.9693574 | 3.9159366 | INSIDE | 473.5938 | 1.3586537 | 2.5644576 | 4852 |
| 1.8429657 | 3.5874673 | INSIDE | 489.4102 | 1.6580461 | 3.1558882 | 4188 |
| 1.8575855 | 3.6240064 | INSIDE | 120.1825 | | | |
| 1.8910817 | 3.7091322 | INSIDE | | | | |
| 2.1544406 | 4.4519599 | INSIDE | | 1.8294481 | 3.5540109 | 2790 |
| 1.995145 | 3.9865617 | INSIDE | 163.6339 | 1.3854873 | 2.6126019 | 2366 |
| 1.8215848 | 3.5346927 | INSIDE | 317.3569 | | | |
| 2.008492 | 4.0236143 | INSIDE | 143.4695 | 1.7355502 | 3.3300647 | 3357 |
| 1.6418351 | 3.1206252 | INSIDE | 90.56461 | | | |
| 2.292403 | 4.8987138 | INSIDE | 125.7759 | 1.7776831 | 3.4287509 | 5407 |
| 1.6295445 | 3.0941529 | INSIDE | | | | |
| 1.6753086 | 3.1938767 | INSIDE | 357.4335 | 1.714066 | 3.2808417 | 3134 |
| 1.6050036 | 3.0419651 | INSIDE | 122.6821 | | | |
| 2.3705137 | 5.1712523 | INSIDE | | 1.914882 | 3.7708297 | 1298 |
| 2.5218482 | 5.7431737 | INSIDE | | 1.3777578 | 2.5986418 | 5350 |
| 1.8523893 | 3.6109772 | INSIDE | 2158.934 | 1.5345874 | 2.8970557 | 3205 |
| 2.1809235 | 4.5344372 | INSIDE | 113.0869 | | | |
| 1.6682682 | 3.1783284 | INSIDE | 158.6015 | 1.5839593 | 2.9979146 | 2975 |
| 1.8997151 | 3.731395 | INSIDE | 203.9899 | 1.6020012 | 3.035641 | 2927 |
| 2.192625 | 4.571365 | INSIDE | | 1.3870814 | 2.6154903 | 4942 |
| 2.4480393 | 5.45674 | INSIDE | 623.2902 | 2.2903588 | 4.8917776 | 1287 |
| 1.8399956 | 3.5800894 | INSIDE | 158.2158 | | | |
| 1.7111892 | 3.2743061 | INSIDE | 1435.537 | 1.203387 | 2.3027966 | 4354 |

| Normalized | Normalized | Type | transcript in | Normalized | Normalized | Rank (P2-12H_R1R2) |
|---|---|---|---|---|---|---|
| 2.9310338 | 7.626567 | INSIDE | | | | |
| 2.3375683 | 5.0544997 | INSIDE | 171.9182 | 1.3497173 | 2.5486218 | 3354 |
| 1.749165 | 3.3616395 | INSIDE | 152.3997 | | | |
| 1.8157555 | 3.5204394 | INSIDE | 206.4663 | | | |
| 2.6401548 | 6.2339855 | INSIDE | 130.5695 | | | |
| 1.8754897 | 3.6692614 | INSIDE | | 1.3908921 | 2.6224079 | 4294 |
| 2.0027716 | 4.0076919 | INSIDE | 184.0967 | 1.9018412 | 3.736898 | 3292 |
| 1.6481568 | 3.1343294 | INSIDE | | 1.3094677 | 2.4785008 | 5540 |
| 2.105249 | 4.3027201 | INSIDE | 1799.399 | 1.6507967 | 3.14007 | 4806 |
| 2.1932023 | 4.5731946 | INSIDE | | 1.9699727 | 3.9176071 | 154 |
| 1.6997774 | 3.2485083 | INSIDE | 760.2377 | 1.702215 | 3.2540017 | 1592 |
| 1.7374573 | 3.3344696 | INSIDE | 119.0331 | | | |
| 1.9794655 | 3.9434695 | INSIDE | 321.5224 | 1.5668906 | 2.9626549 | 2099 |
| 2.5121782 | 5.7048075 | INSIDE | 418.8445 | | | |
| 2.1338942 | 4.3890059 | INSIDE | | 1.4480393 | 2.72837 | 3027 |
| 1.812663 | 3.5129012 | INSIDE | 196.057 | 1.8423522 | 3.5859421 | 1406 |
| 2.0424826 | 4.1195381 | INSIDE | | 1.425709 | 2.6864649 | 5423 |
| 1.7517648 | 3.3677027 | INSIDE | 577.378 | 1.4865181 | 2.8021188 | 2925 |
| 2.0703459 | 4.1998736 | INSIDE | | | | |
| 1.6743402 | 3.1917335 | INSIDE | | 1.4228265 | 2.6811027 | 3460 |
| 2.3180408 | 4.9865458 | INSIDE | | | | |
| 1.7499546 | 3.3634798 | INSIDE | | 1.1762757 | 2.2599263 | 4522 |
| 2.0953875 | 4.2734093 | INSIDE | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.290517 | 4.892314 | INSIDE | | 1.590005 | 3.0105039 | 4414 |
| 1.7879627 | 3.453269 | INSIDE | | 1.2835807 | 2.4344244 | 1709 |
| 2.4891932 | 5.6146387 | INSIDE | 108.3682 | | | |
| 1.5965065 | 3.0241014 | INSIDE | | 1.5169592 | 2.8618721 | 5268 |
| 2.2289002 | 4.6877648 | INSIDE | 1092.392 | 1.6264771 | 3.0875812 | 1438 |
| 1.8702027 | 3.6558394 | INSIDE | | | | |
| 1.7640157 | 3.3964219 | INSIDE | | | | |
| 2.2134461 | 4.6378177 | INSIDE | 136.6261 | 2.1048086 | 4.3014069 | 3206 |
| 2.110159 | 4.3173887 | INSIDE | 2094.711 | 1.6905961 | 3.2279005 | 3913 |
| 2.2751992 | 4.8406447 | INSIDE | 108.9574 | 1.9321408 | 3.8162106 | 4605 |
| 1.8037217 | 3.4911968 | INSIDE | | 1.6110141 | 3.0546649 | 5512 |
| 2.27399 | 4.8365892 | INSIDE | 221.9033 | 1.4062159 | 2.6504106 | 2556 |
| 2.348489 | 5.0929057 | INSIDE | 3108.829 | 2.265677 | 4.8088002 | 88 |
| 2.3881545 | 5.2348729 | INSIDE | | | | |
| 1.9289339 | 3.8077372 | INSIDE | 754.6285 | 1.3360919 | 2.5246649 | 3900 |
| 2.1478403 | 4.4316388 | INSIDE | 404.7739 | | | |
| 2.5171196 | 5.7243806 | INSIDE | 170.1528 | | | |
| 1.8947711 | 3.7186297 | INSIDE | 653.2878 | 1.4547514 | 2.7410932 | 4040 |
| 1.9312024 | 3.8137292 | INSIDE | 143.2527 | | | |
| 2.3637912 | 5.147212 | INSIDE | 227.1851 | 2.123694 | 4.358084 | 832 |
| 2.0677354 | 4.1922809 | INSIDE | 618.9843 | | | |
| 2.0372438 | 4.1046062 | INSIDE | 1676.694 | 1.6398643 | 3.1163652 | 4766 |
| 1.7979324 | 3.4772153 | INSIDE | | 1.7640615 | 3.3965298 | 5503 |
| 1.8787582 | 3.6775838 | INSIDE | 1086.398 | | | |
| 1.8583392 | 3.6259002 | INSIDE | 108.6904 | | | |
| 1.733559 | 3.3254717 | INSIDE | 268.4677 | | | |
| 1.8739625 | 3.6653793 | INSIDE | 855.9595 | 1.7634139 | 3.3950055 | 1349 |
| 2.2604895 | 4.7915403 | INSIDE | 281.5758 | 2.1199226 | 4.3467062 | 4763 |
| 2.1634789 | 4.4799384 | INSIDE | | | | |
| 1.8424084 | 3.5860818 | INSIDE | | | | |
| 1.6022843 | 3.0362368 | INSIDE | | | | |
| 1.9981513 | 3.9948776 | INSIDE | 279.9302 | 1.7696482 | 3.409708 | 3981 |
| 1.7048832 | 3.2600254 | INSIDE | 366.7046 | 1.4662724 | 2.7630706 | 4207 |
| 2.5771048 | 5.9674096 | INSIDE | | 0.6707386 | 1.5918877 | 4147 |
| 2.0624468 | 4.1769411 | INSIDE | 787.6591 | | | |
| 1.7976979 | 3.4766502 | INSIDE | | | | |
| 1.8897537 | 3.7057195 | INSIDE | 2702.414 | 1.8991928 | 3.7300444 | 306 |
| 2.6075919 | 6.094855 | INSIDE | 372.7875 | | | |
| 2.9684498 | 7.8269477 | INSIDE | 126.5019 | 1.5026948 | 2.8337153 | 4333 |
| 2.1077838 | 4.3102866 | INSIDE | 245.9021 | | | |
| 1.7498538 | 3.3632448 | INSIDE | 495.0267 | | | |
| 2.2476132 | 4.7489653 | INSIDE | 129.5066 | | | |
| 2.0188262 | 4.0525394 | INSIDE | 108.0238 | | | |
| 1.8987004 | 3.7287715 | INSIDE | 137.6613 | | | |
| 1.7710111 | 3.4129307 | INSIDE | 459.6956 | | | |
| 2.1135292 | 4.3274861 | INSIDE | 748.3826 | | | |
| 2.3244069 | 5.0085983 | INSIDE | 375.0687 | | | |
| 2.3757977 | 5.1902272 | INSIDE | 167.0535 | | | |
| 1.8044417 | 3.4929396 | INSIDE | 404.7242 | 1.5599062 | 2.9483467 | 2838 |
| 2.308157 | 4.9525001 | INSIDE | | 2.1467311 | 4.4282329 | 3626 |
| 2.364165 | 5.1485458 | INSIDE | 560.8131 | | | |
| 1.8679059 | 3.6500239 | INSIDE | 362.2285 | 1.3041048 | 2.4693046 | 5005 |
| 1.9252951 | 3.7981453 | INSIDE | | 1.47981 | 2.78912 | 3985 |
| 2.5313952 | 5.7813051 | INSIDE | 163.3366 | | | |
| 1.6549578 | 3.1491398 | INSIDE | | | | |
| 1.8947482 | 3.7185707 | INSIDE | | 1.3850436 | 2.6117985 | 4921 |
| 2.004692 | 4.0130302 | INSIDE | | 1.4118744 | 2.6608264 | 2979 |
| 2.1486082 | 4.4339982 | INSIDE | 1006.204 | 1.7886882 | 3.455006 | 2449 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.8734081 | 3.663971 | INSIDE | 187.2379 | 2.1289177 | 4.3738923 | 178 |
| 2.8838606 | 7.3812267 | INSIDE | 2177.057 | 2.211605 | 4.6319029 | 809 |
| 1.9183445 | 3.7798907 | INSIDE | | | | |
| 1.9755479 | 3.9327757 | INSIDE | | 1.3869328 | 2.6152209 | 5595 |
| 2.0640125 | 4.1814766 | INSIDE | 781.1382 | 1.6443498 | 3.1260694 | 4160 |
| 1.7658389 | 3.4007169 | INSIDE | 135.9946 | 1.5506079 | 2.9294055 | 5543 |
| 1.6174963 | 3.0684207 | INSIDE | 1086.653 | | | |
| 1.8696198 | 3.6543626 | INSIDE | 143.8168 | | | |
| 2.0024729 | 4.0068622 | INSIDE | 441.8593 | 1.9313711 | 3.8141752 | 318 |
| 2.2524707 | 4.7649818 | INSIDE | 431.4943 | 1.6052711 | 3.0425292 | 3586 |
| 1.9945476 | 3.9849113 | INSIDE | | | | |
| 2.515428 | 5.7176726 | INSIDE | | | | |
| 1.8711658 | 3.6582808 | INSIDE | 469.4809 | | | |
| 2.1950312 | 4.5789957 | INSIDE | 7104.923 | 1.5859624 | 3.00208 | 668 |
| 1.6749485 | 3.1930796 | INSIDE | | | | |
| 1.7629577 | 3.3939321 | INSIDE | 5652.629 | 1.7851648 | 3.4465783 | 898 |
| 2.1893282 | 4.5609305 | INSIDE | 578.4572 | 1.7578512 | 3.3819403 | 689 |
| 1.9531626 | 3.8722245 | INSIDE | | | | |
| 2.3527963 | 5.1081337 | INSIDE | 422.962 | 0.8526411 | 1.8058037 | 4516 |
| 1.9862564 | 3.9620756 | INSIDE | 179.0755 | | | |
| 1.6444196 | 3.1262206 | INSIDE | 231.3358 | | | |
| 2.4234278 | 5.3644408 | INSIDE | 1018.584 | | | |
| 2.7963822 | 6.946962 | INSIDE | 296.7167 | | | |
| 1.6077303 | 3.0477199 | INSIDE | | 1.4347707 | 2.703392 | 4501 |
| 2.8138952 | 7.0318057 | INSIDE | 189.9925 | | | |
| 1.7761065 | 3.425006 | INSIDE | 3790.191 | 1.8993795 | 3.7305271 | 1971 |
| 2.208445 | 4.6217685 | INSIDE | | | | |
| 1.987709 | 3.9660669 | INSIDE | 1050.94 | 1.6927325 | 3.232684 | 3046 |
| 2.2180307 | 4.6525792 | INSIDE | | | | |
| 2.3811898 | 5.2096621 | INSIDE | 186.9959 | | | |
| 1.9088572 | 3.7551153 | INSIDE | 245.8682 | | | |
| 2.4675894 | 5.5311881 | INSIDE | 384.8221 | 1.3857577 | 2.6130916 | 4039 |
| 2.24781 | 4.7496131 | INSIDE | 808.5889 | | | |
| 2.3205433 | 4.995203 | INSIDE | 724.1879 | | | |
| 1.8934247 | 3.7151609 | INSIDE | 287.1358 | | | |
| 2.0402818 | 4.1132587 | INSIDE | 236.8589 | | | |
| 2.5673945 | 5.9273798 | INSIDE | 121.804 | 1.8731037 | 3.663198 | 2487 |
| 2.14988 | 4.4379087 | INSIDE | 165.5943 | | | |
| 2.39659 | 5.2655711 | INSIDE | | 2.1409047 | 4.4103853 | 1047 |
| 1.767867 | 3.4055009 | INSIDE | | 1.077718 | 2.1106948 | 5453 |
| 1.779884 | 3.4339856 | INSIDE | 1335.301 | | | |
| 2.259957 | 4.7897721 | INSIDE | 185.9303 | 1.2857813 | 2.4381406 | 3925 |
| 1.934242 | 3.8217728 | INSIDE | 1686.238 | | | |
| 2.3711548 | 5.1735508 | INSIDE | 660.1777 | 1.5513511 | 2.9309149 | 3284 |
| 3.4326088 | 10.797376 | INSIDE | | | | |
| 1.9633554 | 3.8996791 | INSIDE | 1393.163 | 1.2557105 | 2.3878472 | 330 |
| 1.9717422 | 3.922415 | INSIDE | | | | |
| 2.256653 | 4.7788153 | INSIDE | 388.8627 | | | |
| 1.7567459 | 3.3793503 | INSIDE | 748.1323 | | | |
| 1.6853158 | 3.2161079 | INSIDE | 3650.99 | | | |
| 1.8025434 | 3.4883466 | INSIDE | 256.4641 | 1.2983222 | 2.4594269 | 5192 |
| 2.14115 | 4.4111353 | INSIDE | 425.774 | | | |
| 1.6959202 | 3.2398347 | INSIDE | 618.7736 | 1.4957001 | 2.8200097 | 3972 |
| 1.8179014 | 3.5256797 | INSIDE | | | | |
| 2.049914 | 4.1408129 | INSIDE | 4223.56 | 1.6661954 | 3.1737652 | 5189 |
| 1.6284245 | 3.0917518 | INSIDE | 160.3647 | | | |
| 2.2602265 | 4.7906669 | INSIDE | 175.0295 | | | |
| 1.6912299 | 3.2293189 | INSIDE | 86.44846 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.126753 | 4.3673344 | INSIDE | | | | |
| 1.6265937 | 3.0878308 | INSIDE | | 1.4457134 | 2.7239749 | 5555 |
| 1.6699558 | 3.1820484 | INSIDE | 129.9708 | | | |
| 2.1705673 | 4.5020039 | INSIDE | 651.7518 | | | |
| 2.2126517 | 4.6352646 | INSIDE | 153.6463 | | | |
| 1.8954728 | 3.7204388 | INSIDE | | | | |
| 1.7451357 | 3.3522638 | INSIDE | 487.3846 | | | |
| 2.4655516 | 5.5233808 | INSIDE | 94.33367 | | | |
| 1.9722433 | 3.9237777 | INSIDE | 441.2784 | | | |
| 2.2601964 | 4.7905669 | INSIDE | 111.6738 | | | |
| 1.8440924 | 3.5902701 | INSIDE | 152.6602 | | | |
| 2.2631357 | 4.800337 | INSIDE | | 2.3908172 | 5.2445435 | 134 |
| 1.7552722 | 3.3759001 | INSIDE | 627.5302 | 1.8384695 | 3.5763043 | 2995 |
| 2.130106 | 4.3774964 | INSIDE | 191.5875 | | | |
| 1.8607091 | 3.6318613 | INSIDE | 369.3485 | | | |
| 2.1666017 | 4.489646 | INSIDE | 1189.669 | 1.8565342 | 3.6213665 | 5183 |
| 1.6981269 | 3.244794 | INSIDE | | 1.5774674 | 2.9844548 | 1463 |
| 2.0673902 | 4.191278 | INSIDE | 108.5707 | 1.7093614 | 3.2701604 | 3542 |
| 2.127328 | 4.3690754 | INSIDE | 1647.28 | | | |
| 2.3680174 | 5.1623122 | INSIDE | 214.9218 | | | |
| 1.8481244 | 3.6003182 | INSIDE | | | | |
| 1.8528951 | 3.6122434 | INSIDE | | | | |
| 1.6478115 | 3.1335793 | INSIDE | | | | |
| 2.2833803 | 4.8681725 | INSIDE | 98.70368 | | | |
| 1.9802785 | 3.9456924 | INSIDE | | | | |
| 1.9183755 | 3.7799719 | INSIDE | 92.92792 | | | |
| 2.3917832 | 5.2480563 | INSIDE | | | | |
| 2.9033382 | 7.4815552 | INSIDE | 426.9154 | | | |
| 2.1559796 | 4.4567116 | INSIDE | 761.3406 | 1.7552001 | 3.3757314 | 4991 |
| 1.924312 | 3.795558 | INSIDE | 189.2317 | 1.5916402 | 3.0139181 | 5006 |
| 2.374797 | 5.1866284 | INSIDE | 161.6212 | 1.3248334 | 2.5050396 | 4317 |
| 2.0687597 | 4.1952585 | INSIDE | 2161.894 | 1.7094089 | 3.2702681 | 1442 |
| 2.171397 | 4.5045937 | INSIDE | 130.0457 | | | |
| 1.682284 | 3.2093564 | INSIDE | | | | |
| 2.163655 | 4.4804853 | INSIDE | 884.9813 | | | |
| 1.7774669 | 3.4282371 | INSIDE | | 1.5084139 | 2.8449709 | 3767 |
| 1.7644846 | 3.397526 | INSIDE | 2158.289 | 1.2813734 | 2.4307026 | 5565 |
| 1.9069479 | 3.750149 | INSIDE | | | | |
| 1.6985198 | 3.2456778 | INSIDE | 403.2735 | | | |
| 1.8767964 | 3.6725863 | INSIDE | 259.8573 | 1.3385949 | 2.5290488 | 2796 |
| 2.343397 | 5.0749619 | INSIDE | 2220.262 | 1.9388776 | 3.8340725 | 524 |
| 1.8118495 | 3.5109209 | INSIDE | 449.3905 | | | |
| 2.4592416 | 5.4992756 | INSIDE | 272.8905 | | | |
| 2.1793077 | 4.5293615 | INSIDE | 319.2978 | | | |
| 1.8156322 | 3.5201385 | INSIDE | 274.5984 | | | |
| 1.7076113 | 3.2661958 | INSIDE | 196.4341 | | | |
| 1.744395 | 3.3505432 | INSIDE | | | | |
| 2.392962 | 5.2523462 | INSIDE | | | | |
| 1.7439381 | 3.3494822 | INSIDE | 234.6647 | | | |
| 2.0710845 | 4.2020243 | INSIDE | 369.6575 | 1.5330184 | 2.8939067 | 1288 |
| 2.298965 | 4.921046 | INSIDE | 387.5795 | 1.597973 | 3.0271769 | 1273 |
| 2.1288095 | 4.3735643 | INSIDE | 137.0866 | | | |
| 1.7824982 | 3.4402137 | INSIDE | 149.5168 | | | |
| 1.8607025 | 3.6318447 | INSIDE | 428.6432 | | | |
| 1.9269267 | 3.8024432 | INSIDE | 314.293 | | | |
| 2.1185184 | 4.3424776 | INSIDE | 156.9928 | | | |
| 2.195196 | 4.5795188 | INSIDE | 923.1388 | 1.5269766 | 2.8818128 | 3438 |
| 2.2853441 | 4.8748036 | INSIDE | 645.2163 | | | |

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|---|---|---|---|---|---|---|
| 2.2844143 | 4.8716629 | INSIDE | 283.4718 | 1.7390448 | 3.3381408 | 5442 |
| 1.9241965 | 3.7952542 | INSIDE | 483.9818 | | | |
| 1.6432694 | 3.1237292 | INSIDE | 167.3643 | 1.2890415 | 2.4436565 | 4981 |
| 2.220853 | 4.6616898 | INSIDE | 354.676 | 0.8747971 | 1.8337502 | 5529 |
| 1.6299475 | 3.0950174 | INSIDE | 606.421 | 1.5659523 | 2.9607287 | 1295 |
| 2.0357096 | 4.1002435 | INSIDE | 237.0471 | 1.5589979 | 2.9464911 | 4505 |
| 1.9394705 | 3.8356485 | INSIDE | 372.0096 | 2.108732 | 4.3131204 | 2227 |
| 2.0851345 | 4.2431465 | INSIDE | 214.6549 | | | |
| 1.7585073 | 3.3834787 | INSIDE | 320.2097 | | | |
| 1.8616412 | 3.6342085 | INSIDE | | | | |
| 1.9996089 | 3.9989158 | INSIDE | 979.621 | 1.960135 | 3.8909839 | 198 |
| 2.5405748 | 5.8182077 | INSIDE | 1099.077 | 2.0317423 | 4.0889837 | 5538 |
| 2.0657692 | 4.1865713 | INSIDE | 154.8195 | | | |
| 1.6859483 | 3.2175182 | INSIDE | 1526.761 | | | |
| 1.7409383 | 3.3425249 | INSIDE | 133.3398 | | | |
| 2.254667 | 4.7722413 | INSIDE | | | | |
| 2.5487428 | 5.8512416 | INSIDE | | | | |
| 2.2324657 | 4.6993646 | INSIDE | | | | |
| 1.912657 | 3.7650186 | INSIDE | 142.1523 | 1.0540873 | 2.0764042 | 5519 |
| 2.252861 | 4.7662711 | INSIDE | | | | |
| 2.13328 | 4.3871377 | INSIDE | 292.9118 | | | |
| 1.9643747 | 3.9024353 | INSIDE | 315.3683 | 1.5525638 | 2.9333796 | 4232 |
| 1.9614267 | 3.8944692 | INSIDE | 422.437 | 1.2662534 | 2.4053609 | 5204 |
| 1.7032697 | 3.2563814 | INSIDE | 132.5608 | | | |
| 1.8483672 | 3.6009241 | INSIDE | 186.6718 | | | |
| 2.092726 | 4.2655329 | INSIDE | 361.2087 | | | |
| 1.8336446 | 3.5643638 | INSIDE | 129.5484 | | | |
| 1.7500314 | 3.3636589 | INSIDE | 331.4274 | | | |
| 1.9470512 | 3.8558561 | INSIDE | | 1.478784 | 2.7871372 | 4929 |
| 1.7863775 | 3.4494767 | INSIDE | 616.3577 | | | |
| 1.795074 | 3.4703327 | INSIDE | 633.4207 | 1.8225847 | 3.5371434 | 2308 |
| 1.9116851 | 3.7624831 | INSIDE | 2252.688 | | | |
| 2.3095584 | 4.9573132 | INSIDE | 199.7923 | | | |
| 1.9375702 | 3.8305995 | INSIDE | | | | |
| 2.71141 | 6.5496145 | INSIDE | 530.463 | | | |
| 1.6260124 | 3.0865869 | INSIDE | | | | |
| 1.7665632 | 3.4024246 | INSIDE | 2513.279 | | | |
| 1.7495793 | 3.362605 | INSIDE | 539.2684 | | | |
| 2.3002002 | 4.9252611 | INSIDE | 103.2084 | | | |
| 2.211418 | 4.6313025 | INSIDE | 123.0044 | | | |
| 2.149689 | 4.4373212 | INSIDE | 170.3463 | | | |
| 1.9379922 | 3.8317202 | INSIDE | 2116.923 | | | |
| 2.242931 | 4.7335777 | INSIDE | 218.7114 | | | |
| 1.7128356 | 3.2780449 | INSIDE | 440.1949 | | | |
| 1.6320486 | 3.0995281 | INSIDE | 1814.669 | | | |
| 1.5913537 | 3.0133196 | INSIDE | 151.514 | 1.47595 | 2.7816675 | 3162 |
| 1.7402209 | 3.3408632 | INSIDE | | | | |
| 1.8350787 | 3.5679087 | INSIDE | 451.6691 | 1.8530607 | 3.612658 | 2266 |
| 1.737201 | 3.3338773 | INSIDE | 203.8382 | 1.4519058 | 2.735692 | 5036 |
| 1.9995353 | 3.9987118 | INSIDE | 484.8441 | 1.8394325 | 3.5786923 | 2150 |
| 2.3950338 | 5.2598943 | INSIDE | 124.6646 | 1.9577105 | 3.8844504 | 248 |
| 1.8371067 | 3.5729276 | INSIDE | | | | |
| 1.731475 | 3.3206715 | INSIDE | 485.4319 | 1.445536 | 2.72364 | 5551 |
| 2.256198 | 4.7773084 | INSIDE | | | | |
| 1.8148706 | 3.5182807 | INSIDE | 248.5496 | 1.5899149 | 3.0103159 | 5515 |
| 2.0990446 | 4.2842557 | INSIDE | | | | |
| 1.6057669 | 3.043575 | INSIDE | | | | |
| 2.1764815 | 4.5204973 | INSIDE | 356.8723 | 1.4240327 | 2.6833453 | 4008 |

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|---|---|---|---|---|---|---|
| 1.8120795 | 3.5114807 | INSIDE | | | | |
| 2.0175226 | 4.0488792 | INSIDE | | 1.8029144 | 3.4892438 | 2232 |
| 1.6770071 | 3.1976391 | INSIDE | 222.3609 | | | |
| 2.3188522 | 4.9893511 | INSIDE | | 1.6811811 | 3.2069039 | 243 |
| 2.1743708 | 4.5138886 | INSIDE | 478.9485 | 1.9531893 | 3.8722962 | 3486 |
| 1.7895238 | 3.4570077 | INSIDE | 229.9912 | 1.7821434 | 3.4393678 | 1843 |
| 1.910712 | 3.7599462 | INSIDE | 392.2164 | 1.9607922 | 3.8927568 | 4798 |
| 2.066473 | 4.1886142 | INSIDE | 378.9282 | 1.7266014 | 3.3094728 | 4367 |
| 2.1374176 | 4.399738 | INSIDE | 120.5992 | | | |
| 1.8305392 | 3.5566998 | INSIDE | 97.97869 | | | |
| 2.326603 | 5.0162283 | INSIDE | | 1.4013666 | 2.6415168 | 4959 |
| 2.1473114 | 4.4300144 | INSIDE | | | | |
| 1.9736814 | 3.9276909 | INSIDE | 1309.793 | 1.6191101 | 3.071855 | 2328 |
| 1.674002 | 3.1909854 | INSIDE | 489.1437 | | | |
| 1.7057712 | 3.2620326 | INSIDE | 720.3893 | | | |
| 1.9513322 | 3.8673148 | INSIDE | | | | |
| 2.2062814 | 4.6148425 | INSIDE | 2299.417 | | | |
| 1.9002329 | 3.7327345 | INSIDE | 748.4291 | 1.7458619 | 3.3539517 | 4986 |
| 1.9009058 | 3.7344759 | INSIDE | | 1.4761939 | 2.7821378 | 5257 |
| 1.9300085 | 3.8105744 | INSIDE | | | | |
| 1.7716202 | 3.4143719 | INSIDE | 1219.009 | | | |
| 1.7245307 | 3.3047261 | INSIDE | 539.9329 | | | |
| 1.6846577 | 3.2146412 | INSIDE | 394.651 | | | |
| 2.0041857 | 4.0116221 | INSIDE | 93.751 | 1.32144 | 2.4991543 | 4925 |
| 1.8618263 | 3.6346748 | INSIDE | | | | |
| 1.6526676 | 3.1441447 | INSIDE | 817.2443 | | | |
| 2.2069373 | 4.616941 | INSIDE | 242.3395 | | | |
| 1.8358805 | 3.5698922 | INSIDE | | | | |
| 1.6295198 | 3.0940999 | INSIDE | | | | |
| 1.8495252 | 3.6038156 | INSIDE | 864.4376 | | | |
| 1.6262982 | 3.0871984 | INSIDE | 728.8035 | | | |
| 1.9300237 | 3.8106146 | INSIDE | | | | |
| 1.9299022 | 3.8102937 | INSIDE | 237.0153 | | | |
| 1.8366963 | 3.5719114 | INSIDE | 216.3039 | 1.7896975 | 3.4574239 | 491 |
| 2.3752987 | 5.1884323 | INSIDE | | | | |
| 1.6648911 | 3.1708972 | INSIDE | 612.0887 | | | |
| 2.4872494 | 5.607079 | INSIDE | 444.1833 | | | |
| 1.9664891 | 3.9081588 | INSIDE | 433.9603 | | | |
| 2.1367261 | 4.3976296 | INSIDE | 323.7952 | | | |
| 1.675661 | 3.1946569 | INSIDE | 370.3005 | | | |
| 2.0361829 | 4.1015889 | INSIDE | 748.0764 | | | |
| 2.1148832 | 4.3315495 | INSIDE | 118.1617 | | | |
| 2.308783 | 4.9546495 | INSIDE | 201.9208 | 1.5255367 | 2.878938 | 4845 |
| 1.7422132 | 3.34548 | INSIDE | 190.8781 | 1.2223353 | 2.333241 | 5504 |
| 2.1189966 | 4.3439172 | INSIDE | 283.7714 | | | |
| 1.9767475 | 3.9360471 | INSIDE | | | | |
| 1.8132099 | 3.5142331 | INSIDE | | | | |
| 2.1475117 | 4.4306295 | INSIDE | 261.452 | | | |
| 1.7538003 | 3.3724576 | INSIDE | | | | |
| 1.9288708 | 3.8075706 | INSIDE | 257.239 | | | |
| 1.7980098 | 3.4774019 | INSIDE | 705.7809 | | | |
| 1.6643802 | 3.1697745 | INSIDE | | 1.7485433 | 3.3601911 | 3952 |
| 1.9403273 | 3.8379271 | INSIDE | 902.0457 | | | |
| 1.6666101 | 3.1746776 | INSIDE | 184.1755 | | | |
| 1.7900189 | 3.4581942 | INSIDE | | | | |
| 1.8564594 | 3.6211788 | INSIDE | 114.0949 | | | |
| 2.3016827 | 4.9303248 | INSIDE | 793.3365 | | | |
| 2.0027525 | 4.0076388 | INSIDE | 2538.177 | | | |

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|---|---|---|---|---|---|---|
| 1.7962089 | 3.4730638 | INSIDE | | 1.841055 | 3.5827193 | 2598 |
| 1.8485302 | 3.601331 | INSIDE | 174.915 | | | |
| 1.6917696 | 3.2305272 | INSIDE | 112.8427 | | | |
| 1.6625105 | 3.1656692 | INSIDE | | | | |
| 2.014906 | 4.0415424 | INSIDE | 239.5748 | | | |
| 1.7929235 | 3.4651637 | INSIDE | 143.86 | | | |
| 1.601592 | 3.0347801 | INSIDE | | | | |
| 2.3645177 | 5.1498046 | INSIDE | 249.9873 | | | |
| 1.6322387 | 3.0999366 | INSIDE | 1868.623 | 1.633061 | 3.101704 | 3828 |
| 1.7552096 | 3.3757536 | INSIDE | 707.3026 | | | |
| 1.9717901 | 3.9225453 | INSIDE | 2876.584 | 1.6857361 | 3.217045 | 713 |
| 2.0029826 | 4.0082781 | INSIDE | 269.9825 | 2.2995756 | 4.9231292 | 2558 |
| 1.9416224 | 3.8413739 | INSIDE | | | | |
| 1.8173678 | 3.5243759 | INSIDE | 338.041 | | | |
| 1.9035587 | 3.7413494 | INSIDE | 276.8295 | 1.4314296 | 2.6971385 | 5549 |
| 2.1451871 | 4.4234962 | INSIDE | 1975.348 | | | |
| 2.2386334 | 4.719498 | INSIDE | 238.8202 | | | |
| 1.9669626 | 3.9094417 | INSIDE | | | | |
| 1.8903333 | 3.7072086 | INSIDE | 1203.19 | 2.093428 | 4.267609 | 826 |
| 1.5862532 | 3.0026851 | INSIDE | | 1.6597542 | 3.1596269 | 2948 |
| 1.9906157 | 3.9740656 | INSIDE | 119.1433 | | | |
| 1.625379 | 3.085232 | INSIDE | 1216.949 | | | |
| 2.0217104 | 4.0606492 | INSIDE | | | | |
| 1.6171393 | 3.0676615 | INSIDE | | | | |
| 1.9021109 | 3.7375967 | INSIDE | 1059.267 | | | |
| 2.2287023 | 4.6871218 | INSIDE | 548.147 | | | |
| 2.3318517 | 5.0345112 | INSIDE | | | | |
| 1.8271326 | 3.5483113 | INSIDE | 791.2463 | 1.6328465 | 3.1012428 | 3441 |
| 2.1088145 | 4.3133671 | INSIDE | | 1.3908075 | 2.6222541 | 3720 |
| 1.7121546 | 3.2764979 | INSIDE | | | | |
| 1.7028841 | 3.2555112 | INSIDE | 583.9214 | | | |
| 2.0636709 | 4.1804867 | INSIDE | 278.2999 | | | |
| 1.9278011 | 3.8047485 | INSIDE | | | | |
| 1.9761285 | 3.9343587 | INSIDE | 1152.023 | 1.7193089 | 3.2927863 | 1612 |
| 1.7632962 | 3.3947285 | INSIDE | 1418.49 | 1.3397777 | 2.5311231 | 3295 |
| 1.821455 | 3.5343747 | INSIDE | 128.5311 | | | |
| 2.2871072 | 4.8807647 | INSIDE | | | | |
| 1.959822 | 3.8901398 | INSIDE | 147.8275 | | | |
| 2.0211382 | 4.059039 | INSIDE | 607.2008 | | | |
| 1.9880223 | 3.9669282 | INSIDE | 961.7272 | | | |
| 1.6152022 | 3.0635453 | INSIDE | 963.5446 | 1.8073134 | 3.4998993 | 3336 |
| 2.1983168 | 4.5894358 | INSIDE | | | | |
| 1.9306849 | 3.8123614 | INSIDE | | | | |
| 1.9740164 | 3.928603 | INSIDE | 145.3382 | | | |
| 1.8044128 | 3.4928696 | INSIDE | | | | |
| 2.0914044 | 4.2616272 | INSIDE | | | | |
| 2.0696604 | 4.1978785 | INSIDE | 847.0571 | 1.8022889 | 3.4877313 | 3017 |
| 1.8686187 | 3.6518277 | INSIDE | | 1.5204794 | 2.8688636 | 1889 |
| 2.361269 | 5.1382212 | INSIDE | 1605.53 | | | |
| 1.886408 | 3.6971357 | INSIDE | 137.0853 | | | |
| 2.0719388 | 4.2045133 | INSIDE | 184.4115 | 1.7537092 | 3.3722446 | 1855 |
| 1.6635607 | 3.1679745 | INSIDE | 499.3073 | 1.887764 | 3.7006123 | 3536 |
| 1.9734666 | 3.9271062 | INSIDE | 1081.026 | 1.4514238 | 2.7347781 | 4353 |
| 2.1129057 | 4.3256163 | INSIDE | 433.5669 | 1.5347122 | 2.8973063 | 3140 |
| 1.8310055 | 3.5578495 | INSIDE | 439.3975 | | | |
| 1.9926473 | 3.9796658 | INSIDE | | | | |
| 2.3359413 | 5.0488027 | INSIDE | | | | |
| 1.8017027 | 3.4863145 | INSIDE | 184.0009 | | | |

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|---|---|---|---|---|---|---|
| 2.1451762 | 4.4234628 | INSIDE | 901.7613 | 1.5450996 | 2.9182421 | 4085 |
| 1.9014269 | 3.7358251 | INSIDE | 1353.5 | | | |
| 2.1493614 | 4.4363137 | INSIDE | | 1.8667748 | 3.6471633 | 4470 |
| 1.9954809 | 3.98749 | INSIDE | | 1.5019312 | 2.8322158 | 5287 |
| 2.1521912 | 4.445024 | INSIDE | | | | |
| 2.6154683 | 6.1282209 | INSIDE | 442.4561 | | | |
| 2.0605931 | 4.1715776 | INSIDE | 171.5117 | | | |
| 1.7659514 | 3.4009821 | INSIDE | | | | |
| 2.3245587 | 5.0091253 | INSIDE | 296.9906 | | | |
| 1.8170966 | 3.5237134 | INSIDE | | 2.6237059 | 6.1633123 | 35 |
| 1.8787805 | 3.6776406 | INSIDE | 322.1885 | | | |
| 1.9066497 | 3.7493739 | INSIDE | 500.5962 | | | |
| 1.7448683 | 3.3516426 | INSIDE | | | | |
| 2.5045352 | 5.6746649 | INSIDE | | | | |
| 1.6316 | 3.0985645 | INSIDE | | | | |
| 1.8857164 | 3.6953638 | INSIDE | 1220.44 | | | |
| 2.3987622 | 5.2735052 | INSIDE | 755.1 | 1.9340727 | 3.8213243 | 1435 |
| 2.391941 | 5.2486304 | INSIDE | 173.5159 | | | |
| 1.758487 | 3.3834311 | INSIDE | 202.3238 | | | |
| 2.256063 | 4.7768613 | INSIDE | 723.1403 | 1.0732509 | 2.1041695 | 2270 |
| 1.9120557 | 3.7634497 | INSIDE | 663.5988 | | | |
| 1.6069795 | 3.0461342 | INSIDE | 246.3641 | | | |
| 2.1645668 | 4.4833179 | INSIDE | 951.0166 | 1.5818833 | 2.9936038 | 5598 |
| 1.8866147 | 3.6976654 | INSIDE | 1289.691 | 1.6096234 | 3.0517217 | 5232 |
| 2.4967782 | 5.6442356 | INSIDE | 134.6757 | | | |
| 1.9884926 | 3.9682216 | INSIDE | 7157.248 | 1.0409739 | 2.0576162 | 4663 |
| 1.9393271 | 3.8352672 | INSIDE | | | | |
| 1.8681769 | 3.6507096 | INSIDE | 305.619 | 1.7427158 | 3.3466456 | 490 |
| 1.7780586 | 3.4296435 | INSIDE | | | | |
| 2.4772816 | 5.5684724 | INSIDE | 275.2295 | | | |
| 1.8238986 | 3.5403662 | INSIDE | 167.1553 | | | |
| 2.309916 | 4.9585421 | INSIDE | 144.6206 | 1.9916468 | 3.9769069 | 662 |
| 2.0856407 | 4.2446356 | INSIDE | 1905.573 | | | |
| 1.7362871 | 3.331766 | INSIDE | 126.0653 | | | |
| 1.8403156 | 3.5808835 | INSIDE | | | | |
| 2.0917952 | 4.2627818 | INSIDE | 889.0388 | | | |
| 1.9823964 | 3.951489 | INSIDE | | | | |
| 1.6521928 | 3.1431101 | INSIDE | | | | |
| 1.629344 | 3.0937229 | INSIDE | 244.1153 | | | |
| 1.9144998 | 3.7698309 | INSIDE | 160.4111 | | | |
| 2.0866504 | 4.2476073 | INSIDE | 106.0111 | | | |
| 1.6286227 | 3.0921766 | INSIDE | 2664.736 | 1.6170274 | 3.0674236 | 4119 |
| 1.6920033 | 3.2310505 | INSIDE | 583.3428 | 1.6681275 | 3.1780184 | 3024 |
| 1.8885074 | 3.7025197 | INSIDE | 151.8991 | | | |
| 1.6803036 | 3.2049539 | INSIDE | 1130.233 | 1.8144373 | 3.5172242 | 2791 |
| 2.0642848 | 4.1822659 | INSIDE | 119.1746 | | | |
| 2.129898 | 4.3768653 | INSIDE | 885.5021 | 1.4787322 | 2.7870371 | 4323 |
| 2.4408712 | 5.4296951 | INSIDE | 478.7329 | | | |
| 2.2487853 | 4.7528251 | INSIDE | 268.7619 | | | |
| 2.1957774 | 4.5813647 | INSIDE | | | | |
| 1.5910438 | 3.0126724 | INSIDE | 279.8329 | 1.49131 | 2.8114414 | 3298 |
| 1.7930722 | 3.4655209 | INSIDE | 832.4058 | | | |
| 1.993505 | 3.9820325 | INSIDE | 196.6059 | | | |
| 1.7102472 | 3.2721689 | INSIDE | 299.3685 | | | |
| 2.3287103 | 5.0235607 | INSIDE | 96.56364 | | | |
| 1.7947465 | 3.4695451 | INSIDE | 204.7102 | 1.6465976 | 3.1309438 | 4631 |
| 1.7813493 | 3.4374752 | INSIDE | 567.2739 | 1.4701127 | 2.7704353 | 4604 |
| 1.6359404 | 3.1079007 | INSIDE | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.8512198 | 3.6080512 | INSIDE | 2239.335 | 1.3501501 | 2.5493865 | 3289 |
| 1.7328318 | 3.3237959 | INSIDE | 666.5382 | | | |
| 1.6839596 | 3.213086 | INSIDE | 664.7275 | 1.3052629 | 2.4712876 | 1470 |
| 1.7377284 | 3.3350963 | INSIDE | | | | |
| 2.0403628 | 4.1134896 | INSIDE | 344.6441 | | | |
| 1.6608067 | 3.1619328 | INSIDE | | | | |
| 2.1335201 | 4.3878679 | INSIDE | 494.2351 | 1.6587309 | 3.1573866 | 3362 |
| 1.8281024 | 3.5506974 | INSIDE | 2701.885 | | | |
| 1.7615703 | 3.3906698 | INSIDE | 2850.66 | 1.7505766 | 3.3649302 | 4864 |
| 1.8848692 | 3.6931944 | INSIDE | 758.2372 | | | |
| 1.6418848 | 3.1207327 | INSIDE | | | | |
| 1.8498595 | 3.6046508 | INSIDE | 330.1159 | 2.1979825 | 4.5883724 | 2666 |
| 1.8708104 | 3.6573797 | INSIDE | 713.8957 | | | |
| 1.6797162 | 3.2036492 | INSIDE | 992.5947 | 1.5639892 | 2.9567027 | 4836 |
| 1.7336683 | 3.3257237 | INSIDE | 1777.727 | 1.9336897 | 3.82031 | 31 |
| 2.1214955 | 4.3514478 | INSIDE | 210.6017 | | | |
| 1.7813495 | 3.4374757 | INSIDE | 119.5249 | | | |
| 2.046232 | 4.1302583 | INSIDE | 180.7152 | | | |
| 2.1805658 | 4.5333131 | INSIDE | | | | |
| 2.3190672 | 4.9900947 | INSIDE | 1969.067 | | | |
| 1.8052461 | 3.4948877 | INSIDE | | | | |
| 2.0068524 | 4.0190441 | INSIDE | 618.7236 | | | |
| 1.9361315 | 3.8267814 | INSIDE | 285.1714 | | | |
| 1.7033043 | 3.2564595 | INSIDE | | | | |
| 1.6734501 | 3.1897649 | INSIDE | 642.3544 | | | |
| 1.7223502 | 3.2997351 | INSIDE | | | | |
| 1.6105444 | 3.0536705 | INSIDE | 1238.294 | 1.5963339 | 3.0237396 | 3796 |
| 2.0196083 | 4.0547369 | INSIDE | | | | |
| 2.0222821 | 4.0622586 | INSIDE | | | | |
| 1.8373528 | 3.5735372 | INSIDE | 129.2906 | | | |
| 1.8598301 | 3.6296491 | INSIDE | 516.1451 | | | |
| 1.9848771 | 3.9582894 | INSIDE | | 2.3625813 | 5.1428971 | 3681 |
| 1.8790153 | 3.6782392 | INSIDE | 1567.694 | | | |
| 2.595263 | 6.0429919 | INSIDE | 978.4115 | | | |
| 2.1750705 | 4.5160783 | INSIDE | | | | |
| 1.8054512 | 3.4953846 | INSIDE | 320.435 | 1.4132806 | 2.6634212 | 2609 |
| 1.6823356 | 3.2094712 | INSIDE | 134.1224 | | | |
| 1.6456392 | 3.1288645 | INSIDE | 603.9487 | | | |
| 2.1487293 | 4.4343705 | INSIDE | 444.1326 | 1.8137044 | 3.5154379 | 4051 |
| 1.6554573 | 3.1502303 | INSIDE | | | | |
| 1.8646715 | 3.64185 | INSIDE | 123.4206 | 2.150781 | 4.4406812 | 3167 |
| 1.7963094 | 3.4733057 | INSIDE | 203.7868 | | | |
| 2.3920546 | 5.2490437 | INSIDE | | | | |
| 1.748526 | 3.3601508 | INSIDE | | | | |
| 1.7643096 | 3.3971139 | INSIDE | | | | |
| 1.666438 | 3.1742989 | INSIDE | | 1.4116242 | 2.660365 | 4778 |
| 1.8364266 | 3.5712437 | INSIDE | 769.1606 | 2.1244152 | 4.3602631 | 1865 |
| 1.805244 | 3.4948826 | INSIDE | | | | |
| 1.686358 | 3.218432 | INSIDE | | | | |
| 2.254783 | 4.7726251 | INSIDE | 616.4229 | | | |
| 2.085773 | 4.2450249 | INSIDE | | 1.496659 | 2.8218846 | 5160 |
| 1.7889811 | 3.4557075 | INSIDE | | | | |
| 1.6082647 | 3.048849 | INSIDE | 405.7786 | | | |
| 1.9465507 | 3.8545186 | INSIDE | 1716.985 | | | |
| 1.9473292 | 3.8565991 | INSIDE | 207.8062 | | | |
| 1.5930073 | 3.0167754 | INSIDE | 188.142 | | | |
| 1.7871115 | 3.4512321 | INSIDE | | | | |
| 1.9710789 | 3.9206121 | INSIDE | 218.6794 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.0464318 | 4.1308303 | INSIDE | 702.2264 | | | |
| 1.6605886 | 3.1614548 | INSIDE | 485.2738 | | | |
| 2.1476328 | 4.4310015 | INSIDE | 483.0363 | | | |
| 2.048102 | 4.1356153 | INSIDE | 323.3313 | | | |
| 1.7252791 | 3.3064409 | INSIDE | 1504.191 | 1.457012 | 2.7453917 | 2802 |
| 1.9622431 | 3.8966736 | INSIDE | 227.8988 | | | |
| 2.4378853 | 5.4184691 | INSIDE | | | | |
| 2.140569 | 4.4093592 | INSIDE | | | | |
| 1.8512626 | 3.6081582 | INSIDE | 277.1771 | | | |
| 1.5927278 | 3.016191 | INSIDE | | | | |
| 1.8356199 | 3.5692474 | INSIDE | 1394.841 | 1.2679485 | 2.4081888 | 3652 |
| 1.8416759 | 3.5842615 | INSIDE | | | | |
| 2.0176215 | 4.0491568 | INSIDE | | | | |
| 1.76804 | 3.4059093 | INSIDE | 221.6991 | | | |
| 2.4556558 | 5.4856242 | INSIDE | 1582.902 | | | |
| 1.7212644 | 3.2972526 | INSIDE | 670.5336 | | | |
| 2.0857053 | 4.2448257 | INSIDE | 340.7525 | | | |
| 1.900233 | 3.7327348 | INSIDE | 986.3594 | | | |
| 1.7092816 | 3.2699795 | INSIDE | | | | |
| 2.1694782 | 4.4986066 | INSIDE | 836.2505 | | | |
| 2.092741 | 4.2655773 | INSIDE | | | | |
| 2.1012459 | 4.2907977 | INSIDE | 599.5624 | | | |
| 2.0364273 | 4.1022838 | INSIDE | 158.5802 | | | |
| 1.8209642 | 3.5331725 | INSIDE | 331.7354 | | | |
| 2.1947389 | 4.578068 | INSIDE | 208.9432 | | | |
| 1.5883965 | 3.0071493 | INSIDE | 1876.03 | 1.701239 | 3.2518011 | 750 |
| 2.200856 | 4.5975205 | INSIDE | | | | |
| 1.8317934 | 3.5597931 | INSIDE | 676.8699 | | | |
| 2.2783322 | 4.8511682 | INSIDE | 117.7761 | | | |
| 1.6502775 | 3.1389401 | INSIDE | | | | |
| 2.3949227 | 5.2594892 | INSIDE | 2725.28 | 2.0066547 | 4.0184934 | 1430 |
| 1.7062356 | 3.2630828 | INSIDE | | | | |
| 1.7782995 | 3.4302162 | INSIDE | 117.5464 | | | |
| 2.0017908 | 4.0049682 | INSIDE | 286.3933 | | | |
| 1.6061516 | 3.0443867 | INSIDE | 351.2539 | 1.4554579 | 2.7424359 | 5474 |
| 1.5995979 | 3.0305883 | INSIDE | | | | |

| Normalized | Normalized | Type | transcript in | Normalized | Normalized | Rank (P2-NS_R1R2) |
|---|---|---|---|---|---|---|
| 2.0757613 | 4.2156681 | DOWNSTREAM | | 1.7117833 | 3.2756547 | 6085 |

**ıes)**

| Normalized | Normalized | Type | transcript in | Normalized | Normalized | Rank (P2-12H_R1R2) |
|---|---|---|---|---|---|---|
| 2.0738177 | 4.2099926 | DOWNSTREAM | | 2.2753289 | 4.8410799 | 1191 |
| 2.2258708 | 4.6779317 | DOWNSTREAM | | 1.5853715 | 3.0008506 | 1168 |
| 1.7924774 | 3.4640924 | DOWNSTR | 508.4818 | 1.9654481 | 3.9053399 | 132 |
| 2.565253 | 5.9185879 | DOWNSTR | 508.8375 | | | |
| 1.8622442 | 3.6357278 | DOWNSTR | 514.3434 | 1.5792174 | 2.9880772 | 4693 |
| 1.644358 | 3.1260872 | DOWNSTR | 147.0285 | 1.3796334 | 2.6020224 | 1449 |
| 2.1525466 | 4.4461191 | DOWNSTREAM | | 2.0229495 | 4.0641383 | 4464 |
| 2.2260847 | 4.6786253 | DOWNSTR | 125.8169 | 1.7683418 | 3.4066218 | 2482 |
| 1.8310543 | 3.5579699 | DOWNSTREAM | | 1.4348227 | 2.7034894 | 1844 |
| 2.1091282 | 4.3143051 | DOWNSTREAM | | 1.4637299 | 2.7582054 | 3754 |
| 2.1501913 | 4.4388664 | DOWNSTREAM | | 2.133825 | 4.3887954 | 1827 |
| 1.6842356 | 3.2137008 | DOWNSTREAM | | | | |
| 2.135418 | 4.3936441 | DOWNSTR | 1703.493 | | | |
| 2.224545 | 4.6736348 | DOWNSTR | 784.2172 | 1.7608818 | 3.3890521 | 2207 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.581408 | 5.9852354 | DOWNSTR | 420.8032 | 1.5387809 | 2.9054888 | 2303 |
| 2.0382407 | 4.1074434 | DOWNSTR | 193.0846 | 1.42854 | 2.6917417 | 4848 |
| 2.0521948 | 4.1473644 | DOWNSTREAM | | | | |
| 1.7463859 | 3.3551701 | DOWNSTR | 267.0241 | | | |
| 2.134475 | 4.3907732 | DOWNSTR | 202.4375 | | | |
| 2.0379357 | 4.1065752 | DOWNSTR | 126.1446 | 1.7327573 | 3.3236243 | 2067 |
| 1.7842245 | 3.4443327 | DOWNSTR | 397.6841 | 1.8971022 | 3.7246431 | 3114 |
| 1.7222989 | 3.2996177 | DOWNSTREAM | | 1.6372786 | 3.1107848 | 1040 |
| 2.119856 | 4.3465056 | DOWNSTREAM | | 1.6152037 | 3.0635485 | 5492 |
| 1.9976065 | 3.9933693 | DOWNSTR | 392.0417 | | | |
| 1.8197602 | 3.5302252 | DOWNSTREAM | | 2.331033 | 5.031655 | 506 |
| 1.823287 | 3.5388657 | DOWNSTREAM | | 1.3276303 | 2.5099007 | 5507 |
| 1.7779994 | 3.4295027 | DOWNSTR | 167.4778 | 1.4697078 | 2.7696579 | 2594 |

| Normalized | Normalized | Type | transcript in | Normalized | Normalized | Rank (P2-12H_R1R2) |
|---|---|---|---|---|---|---|
| 1.7478619 | 3.3586045 | DOWNSTR | 262.8616 | | | |
| 1.6702821 | 3.1827682 | DOWNSTREAM | | 1.3551747 | 2.5582809 | 2910 |
| 1.8330472 | 3.5628882 | DOWNSTR | 105.2789 | | | |
| 2.1466932 | 4.4281166 | DOWNSTR | 189.5659 | | | |
| 2.0536253 | 4.1514787 | DOWNSTR | 225.9483 | 1.9397107 | 3.8362871 | 3761 |
| 1.9827145 | 3.9523604 | DOWNSTR | 180.674 | 1.1738749 | 2.2561686 | 5564 |