

Table 1: Differentially expressed genes, as derived by RnBeads

| Ensembl ID | Chr | Start | End | Symbol | Entrez ID | Description | Gene type | No. sites | No. sites signif | Mean (0) | Mean (1) | Diff | p-fdr | Rank | DM Promoter |
|-----------------|-------|-----------|-----------|----------------|-----------|-----------------------------------------------------------------------------------|-------------------------|-----------|------------------|----------|----------|--------|---------|------|-------------|
| ENSG00000224764 | chr9 | 97690833 | 97697228 | RP11-54O15.3 | | | antisense | 1 | 1 | 0.28 | 0.19 | 0.088 | 0.00098 | 12 | No |
| ENSG00000260466 | chr16 | 87870138 | 87871269 | RP4-536B24.2 | | | antisense | 2 | 1 | 0.38 | 0.28 | 0.1 | 0.0019 | 21 | No |
| ENSG00000136514 | chr3 | 187086120 | 187089864 | RTP4 | 64108 | receptor (chemosensory) protein 4 | coding | 4 | 2 | 0.68 | 0.57 | 0.1 | 0.00062 | 31 | Yes |
| ENSG00000250280 | chr12 | 65675437 | 65680508 | RP11-305O6.3 | | [Source:HGNC Symbol; Acc:HGNC:23992] | sense | 2 | 1 | 0.29 | 0.39 | -0.095 | 0.0045 | 33 | Yes |
| ENSG00000258935 | chr14 | 91033839 | 91036320 | RP11-107RH9.2 | | | intronic | 1 | 1 | 0.35 | 0.44 | -0.084 | 0.0019 | 34 | No |
| ENSG00000130881 | chr9 | 104122699 | 104145801 | BAAT | 570 | bile acid CoA:amino acid N-acyltransferase [Source:HGNC Symbol; Acc:HGNC:932] | protein coding | 1 | 1 | 0.53 | 0.43 | 0.1 | 0.00098 | 35 | Yes |
| ENSG00000129048 | chr3 | 132316081 | 132337811 | ACKR4 | 51554 | atypical chemokine receptor 4 [Source:HGNC Symbol; Acc:HGNC:1611] | protein coding | 2 | 1 | 0.45 | 0.53 | -0.079 | 0.0027 | 39 | No |
| ENSG00000249429 | chr5 | 142869420 | 142910915 | CTD-2050E21.1 | | | lincRNA | 1 | 1 | 0.39 | 0.51 | -0.11 | 0.0073 | 39 | No |
| ENSG00000252774 | chr15 | 64634738 | 64634897 | SNORA48 | | Small nucleolar RNA SNORA48 [Source:RFAM; Acc:RF00554] | snRNA | 1 | 1 | 0.13 | 0.23 | -0.11 | 0.011 | 45 | Yes |
| ENSG00000261117 | chr2 | 12855541 | 12856353 | RP11-333O1.1 | | | lincRNA | 1 | 1 | 0.37 | 0.3 | 0.065 | 0.0018 | 49 | Yes |
| ENSG00000132530 | chr17 | 6658766 | 6678966 | XAF1 | 54739 | XIAP associated factor 1 [Source:HGNC Symbol; Acc:HGNC:30932] | protein coding | 11 | 6 | 0.55 | 0.5 | 0.056 | 0.019 | 62 | No |
| ENSG00000259450 | chr15 | 39480639 | 39486510 | RP11-263N7.1 | | | lincRNA | 1 | 1 | 0.43 | 0.51 | -0.085 | 0.0068 | 64 | No |
| ENSG00000239482 | chr3 | 112021325 | 112051638 | RP11-90K6.1 | | | lincRNA | 2 | 1 | 0.35 | 0.42 | -0.067 | 2.9e-05 | 75 | No |
| ENSG00000164241 | chr5 | 126378250 | 126409184 | C5orf63 | 401207 | chromosome 5 open reading frame 63 [Source:HGNC Symbol; Acc:HGNC:40051] | protein coding | 10 | 4 | 0.42 | 0.47 | -0.048 | 0.01 | 81 | Yes |
| ENSG00000261550 | chr16 | 53069602 | 53086785 | RP11-467J12.4 | | | antisense | 1 | 1 | 0.21 | 0.29 | -0.075 | 0.044 | 84 | No |
| ENSG00000229167 | chr1 | 32037186 | 32041174 | RP11-73M7.1 | | | antisense | 2 | 1 | 0.57 | 0.48 | 0.087 | 2.9e-05 | 86 | No |
| ENSG00000250509 | chr5 | 179868559 | 179870238 | CTC-573N18.1 | | | lincRNA | 1 | 1 | 0.34 | 0.26 | 0.076 | 0.046 | 86 | Yes |
| ENSG00000184795 | chr11 | 67479173 | 67483476 | UNC93B5 | | unc-93 homolog B5 pseudogene (C. elegans) [Source:HGNC Symbol; Acc:HGNC:34051] | unprocessed pseudogene | 3 | 1 | 0.24 | 0.2 | 0.048 | 0.034 | 86 | No |
| ENSG00000171236 | chr19 | 4536421 | 4540486 | LRG1 | 116844 | leucine-rich alpha-2-glycoprotein 1 [Source:HGNC Symbol; Acc:HGNC:29480] | protein coding | 5 | 2 | 0.69 | 0.62 | 0.063 | 0.018 | 90 | Yes |
| ENSG00000259727 | chr15 | 63188011 | 63191742 | RP11-1069G10.2 | | | lincRNA | 1 | 1 | 0.54 | 0.64 | -0.095 | 0.026 | 95 | No |
| ENSG00000204193 | chr9 | 113065801 | 113100127 | TXNDC8 | 255220 | thioredoxin domain containing 8 (spermatzoa) [Source:HGNC Symbol; Acc:HGNC:31454] | protein coding | 2 | 1 | 0.43 | 0.5 | -0.072 | 0.044 | 107 | Yes |
| ENSG00000258355 | chr12 | 106639391 | 106640734 | RP11-651L5.2 | | | sense | 1 | 1 | 0.39 | 0.33 | 0.053 | 0.03 | 125 | No |
| ENSG00000109272 | chr4 | 74718906 | 74719872 | PF4V1 | 5197 | platelet factor 4 variant 1 [Source:HGNC Symbol; Acc:HGNC:8862] | intronic protein coding | 6 | 5 | 0.32 | 0.36 | -0.047 | 0.013 | 126 | Yes |
| ENSG00000255038 | chr11 | 65834748 | 65837090 | RP11-1167A19.2 | | | antisense | 2 | 1 | 0.42 | 0.48 | -0.062 | 0.0084 | 143 | No |
| ENSG0000028176 | chr1 | 30181698 | 30182394 | RP4-656G21.1 | | | lincRNA | 1 | 1 | 0.43 | 0.37 | 0.055 | 0.04 | 147 | Yes |
| ENSG00000235285 | chr13 | 44720606 | 44732358 | SMIM2-IT1 | 100874377 | SMIM2 intronic transcript 1 [Source:HGNC Symbol; Acc:HGNC:41492] | sense intronic | 1 | 1 | 0.55 | 0.63 | -0.079 | 0.0073 | 159 | No |
| ENSG00000258987 | chr14 | 94405901 | 94410475 | RP11-131H24.4 | | | antisense | 5 | 2 | 0.39 | 0.34 | 0.041 | 0.022 | 162 | No |
| ENSG00000254632 | chr11 | 76470960 | 76479267 | RP11-21L23.4 | | | antisense | 1 | 1 | 0.65 | 0.57 | 0.077 | 0.012 | 179 | No |
| ENSG00000261269 | chr5 | 71735730 | 71738214 | RP11-389C8.2 | | | sense | 1 | 1 | 0.61 | 0.69 | -0.081 | 0.0059 | 182 | Yes |
| ENSG00000230454 | chr3 | 50297735 | 50300790 | U73166.2 | 3430 | interferon-induced protein 35 [Source:HGNC Symbol; Acc:HGNC:5399] | overlapping lincRNA | 3 | 2 | 0.34 | 0.38 | -0.037 | 0.00069 | 190 | No |
| ENSG0000068079 | chr17 | 41158742 | 41166473 | IFI35 | | | protein coding | 3 | 2 | 0.24 | 0.2 | 0.037 | 0.00062 | 192 | Yes |
| ENSG00000172232 | chr19 | 825097 | 832017 | AZU1 | 566 | azurocidin 1 [Source:HGNC Symbol; Acc:HGNC:913] | protein coding | 10 | 4 | 0.51 | 0.47 | 0.036 | 0.021 | 206 | No |

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|-----------------|-------|-----------|-----------|----------------|-----------|-----------------------------------------------------------------------------------------------------------------------|----|----|-------|-------|--------|---------|-----|-----|
| ENSG00000108448 | chr17 | 18601311 | 18639431 | TRIM16L | 147166 | tripartite motif containing 16-like [Source:HGNC Symbol; Acc:HGNC:32670] | 4 | 1 | 0.59 | 0.66 | -0.074 | 0.0026 | 216 | No |
| ENSG00000066697 | chr9 | 103189438 | 103213511 | MSANTD3 | 91283 | Myb/SANT-like DNA-binding domain containing 3 [Source:HGNC Symbol; Acc:HGNC:23370] | 3 | 1 | 0.23 | 0.2 | 0.037 | 0.026 | 241 | No |
| ENSG00000188394 | chr9 | 125796806 | 125797975 | GPR21 | 2844 | G protein-coupled receptor 21 [Source:HGNC Symbol; Acc:HGNC:4476] | 3 | 1 | 0.63 | 0.66 | -0.035 | 0.0029 | 274 | Yes |
| ENSG00000232799 | chr2 | 210009965 | 210012411 | CRYGFP | | crystallin, gamma F pseudogene [Source:HGNC Symbol; Acc:HGNC:2413] | 5 | 1 | 0.75 | 0.68 | 0.073 | 0.05 | 294 | No |
| ENSG00000260604 | chr6 | 3905144 | 3912213 | RP11-140K8.5 | | SLAM family member 9 [Source:HGNC Symbol; Acc:HGNC:18430] | 2 | 1 | 0.63 | 0.57 | 0.057 | 0.021 | 298 | Yes |
| ENSG00000162723 | chr1 | 159921282 | 159924044 | SLAMF9 | 89886 | | 4 | 2 | 0.54 | 0.59 | -0.053 | 0.0091 | 311 | No |
| ENSG00000256357 | chr14 | 94896970 | 94931067 | RP11-349J1.2 | | antisense [Source:HGNC Symbol; Acc:HGNC:8078] | 4 | 2 | 0.66 | 0.71 | -0.053 | 0.02 | 313 | Yes |
| ENSG00000269275 | chr19 | 5588947 | 55889493 | CTD-2105E13.15 | | antisense [Source:HGNC Symbol; Acc:HGNC:8078] | 4 | 2 | 0.7 | 0.64 | 0.068 | 0.0041 | 315 | Yes |
| ENSG00000182379 | chr12 | 57610578 | 57620232 | NXPH4 | 11247 | neurexophilin 4 [Source:HGNC Symbol; Acc:HGNC:8078] | 19 | 9 | 0.36 | 0.33 | 0.03 | 0.018 | 326 | No |
| ENSG00000225208 | chr10 | 103070775 | 103071262 | RP11-107H14.2 | | long intergenic non-protein coding RNA 708 [Source:HGNC Symbol; Acc:HGNC:44694] | 1 | 1 | 0.53 | 0.59 | -0.054 | 0.0028 | 334 | Yes |
| ENSG00000232170 | chr10 | 8301294 | 8310268 | LINC00708 | 100507143 | solute carrier family 7 (amino acid transporter light chain, L system), member 5 [Source:HGNC Symbol; Acc:HGNC:11063] | 3 | 2 | 0.56 | 0.61 | -0.056 | 0.044 | 346 | No |
| ENSG00000103257 | chr16 | 87863629 | 87903094 | SLC7A5 | 8140 | RNA, U5f small nuclear 2, pseudogene [Source:HGNC Symbol; Acc:HGNC:42510] | 50 | 25 | 0.61 | 0.56 | 0.05 | 0.0019 | 359 | Yes |
| ENSG00000248884 | chr5 | 67726254 | 67730308 | CTC-537E7.3 | | cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4) [Source:HGNC Symbol; Acc:HGNC:1788] | 2 | 1 | 0.062 | 0.033 | 0.028 | 0.00043 | 378 | Yes |
| ENSG00000251875 | chr1 | 179545403 | 179545484 | RNU5F-2P | | antisense [Source:HGNC Symbol; Acc:HGNC:26259] | 2 | 1 | 0.48 | 0.44 | 0.043 | 0.038 | 386 | No |
| ENSG00000147883 | chr9 | 22002902 | 22009362 | CDKN2B | 1030 | zinc finger CCH-type containing 12A [Source:HGNC Symbol; Acc:HGNC:32584] | 4 | 2 | 0.16 | 0.13 | 0.028 | 0.023 | 389 | No |
| ENSG00000229257 | chr9 | 139952115 | 139956913 | RP11-229P13.22 | | antisense [Source:HGNC Symbol; Acc:HGNC:26259] | 1 | 1 | 0.77 | 0.71 | 0.064 | 0.019 | 442 | Yes |
| ENSG00000258376 | chr14 | 73710726 | 73712687 | RP4-647C14.2 | | antisense [Source:HGNC Symbol; Acc:HGNC:26259] | 4 | 3 | 0.63 | 0.58 | 0.05 | 0.00098 | 450 | Yes |
| ENSG00000163874 | chr1 | 37940153 | 37949980 | ZC3H12A | 80149 | small nucleolar RNA, H/ACA box 2A [Source:HGNC Symbol; Acc:HGNC:32584] | 12 | 5 | 0.36 | 0.33 | 0.032 | 0.026 | 457 | No |
| ENSG00000206612 | chr12 | 49050431 | 49050565 | SNORA2A | 677793 | transmembrane protein 190 [Source:HGNC Symbol; Acc:HGNC:29632] | 1 | 1 | 0.75 | 0.82 | -0.065 | 0.00098 | 475 | Yes |
| ENSG00000238279 | chr1 | 153506079 | 153507591 | BX470102.3 | | antisense [Source:HGNC Symbol; Acc:HGNC:48336] | 1 | 1 | 0.61 | 0.66 | -0.051 | 0.0051 | 517 | No |
| ENSG00000160472 | chr19 | 55888204 | 55889612 | TMEM190 | 147744 | small nucleolar RNA, H/ACA box 71D [Source:HGNC Symbol; Acc:HGNC:32657] | 5 | 2 | 0.74 | 0.69 | 0.054 | 0.023 | 554 | Yes |
| ENSG00000258847 | chr14 | 66424015 | 66471241 | CTD-2014B16.3 | | lincRNA [Source:HGNC Symbol; Acc:HGNC:32657] | 3 | 1 | 0.68 | 0.73 | -0.054 | 0.00069 | 565 | No |
| ENSG00000200354 | chr20 | 37062508 | 37062641 | SNORA71D | 677840 | lincRNA [Source:HGNC Symbol; Acc:HGNC:32657] | 1 | 1 | 0.78 | 0.72 | 0.058 | 0.0074 | 573 | No |
| ENSG00000266998 | chr17 | 75369900 | 75373318 | RP11-936I5.1 | | antisense [Source:HGNC Symbol; Acc:HGNC:48336] | 9 | 4 | 0.59 | 0.62 | -0.023 | 0.022 | 603 | No |
| ENSG00000255093 | chr11 | 111328876 | 111328876 | RP11-794P6.2 | | antisense [Source:HGNC Symbol; Acc:HGNC:6449] | 1 | 1 | 0.62 | 0.58 | 0.041 | 0.0019 | 726 | No |
| ENSG00000267092 | chr19 | 1508381 | 1508962 | CTB-25B13.9 | | antisense [Source:HGNC Symbol; Acc:HGNC:6449] | 2 | 1 | 0.13 | 0.11 | 0.021 | 0.03 | 741 | No |
| ENSG00000249184 | chr4 | 152720652 | 152722500 | RP11-424M21.1 | | lincRNA [Source:HGNC Symbol; Acc:HGNC:6449] | 1 | 1 | 0.79 | 0.84 | -0.054 | 0.026 | 764 | Yes |
| ENSG00000232991 | chr2 | 108370568 | 108438585 | GACAT1 | | gastric cancer associated transcript 1 (non-protein coding) [Source:HGNC Symbol; Acc:HGNC:48336] | 1 | 1 | 0.72 | 0.77 | -0.048 | 0.0021 | 805 | No |
| ENSG00000108759 | chr17 | 39616063 | 39623681 | KRT32 | 3882 | keratin 32, type I [Source:HGNC Symbol; Acc:HGNC:6449] | 3 | 1 | 0.77 | 0.82 | -0.048 | 0.0016 | 903 | Yes |
| ENSG00000259177 | chr15 | 90936722 | 90941113 | RP11-154B12.3 | | antisense [Source:HGNC Symbol; Acc:HGNC:6449] | 1 | 1 | 0.75 | 0.8 | -0.046 | 0.0027 | 931 | No |
| ENSG00000259287 | chr15 | 34150918 | 34157026 | RP11-3D4.2 | | antisense [Source:HGNC Symbol; Acc:HGNC:6449] | 1 | 1 | 0.74 | 0.78 | -0.044 | 0.023 | 972 | No |

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|-----------------|-------|-----------|-----------|---------------|-----------|----------------------------------------------------------------------------------------------------------|---|---|-------|-------|--------|---------|-------|-----|
| ENSG00000234771 | chr9 | 130873450 | 130881013 | SLC25A25-AS1 | 100289019 | SLC25A25 antisense RNA 1 [Source:HGNC Symbol; Acc:HGNC:27844] | 2 | 1 | 0.41 | 0.44 | -0.023 | 0.04 | 1172 | No |
| ENSG00000151631 | chr10 | 4914093 | 4934167 | AKR1C6P | 389932 | aldo-keto reductase family 1, member C6, pseudogene [Source:HGNC Symbol; Acc:HGNC:44680] | 1 | 1 | 0.92 | 0.87 | 0.047 | 0.00065 | 1206 | No |
| ENSG00000253792 | chr5 | 157600609 | 157603430 | CTC-436K13.5 | 360155 | cytochrome c, somatic pseudogene 52 [Source:HGNC Symbol; Acc:HGNC:24393] | 1 | 1 | 0.91 | 0.87 | 0.046 | 0.00029 | 1232 | Yes |
| ENSG00000253673 | chr5 | 157602404 | 157627024 | CTC-436K13.1 | | | 1 | 1 | 0.91 | 0.87 | 0.046 | 0.00029 | 1232 | Yes |
| ENSG00000235700 | chr1 | 157098154 | 157098463 | CYCSP52 | | | 1 | 1 | 0.82 | 0.86 | -0.043 | 0.00011 | 1257 | Yes |
| ENSG00000260362 | chr16 | 9760742 | 9770700 | RP11-297M9.1 | | | 1 | 1 | 0.85 | 0.81 | 0.042 | 0.048 | 1310 | No |
| ENSG00000267239 | chr18 | 13203773 | 13216366 | RP11-794M8.1 | | | 1 | 1 | 0.84 | 0.8 | 0.041 | 0.016 | 1342 | No |
| ENSG00000207625 | chr3 | 35785968 | 35786051 | MIR128-2 | 406916 | microRNA 128-2 [Source:HGNC Symbol; Acc:HGNC:31511] | 1 | 1 | 0.87 | 0.83 | 0.039 | 0.05 | 1527 | No |
| ENSG00000262097 | chr16 | 14103137 | 14109873 | CTD-2135D7.5 | | | 1 | 1 | 0.9 | 0.86 | 0.038 | 0.012 | 1652 | No |
| ENSG00000179447 | chr20 | 19222946 | 19265240 | RP5-1027G4.3 | 100130264 | | 1 | 1 | 0.83 | 0.86 | -0.037 | 0.006 | 1680 | No |
| ENSG00000236171 | chr10 | 118955679 | 118956165 | RP11-501J20.3 | | | 2 | 2 | 0.87 | 0.83 | 0.036 | 0.026 | 1763 | No |
| ENSG00000231394 | chr7 | 55661470 | 55662699 | RP11-310H4.3 | 390940 | phospholipase A2 inhibitor and LY6/PLAUR domain containing [Source:HGNC Symbol; Acc:HGNC:44206] | 1 | 1 | 0.77 | 0.74 | 0.031 | 0.011 | 1945 | Yes |
| ENSG00000234465 | chr19 | 44080952 | 44088116 | PINLYP | | | 1 | 1 | 0.75 | 0.78 | -0.029 | 0.041 | 2127 | No |
| ENSG00000253509 | chr8 | 41132634 | 41134522 | CTD-3080F16.3 | | | 1 | 1 | 0.76 | 0.79 | -0.03 | 0.0018 | 2160 | No |
| ENSG00000249942 | chr4 | 75418301 | 75514664 | AC142293.3 | | | 3 | 1 | 0.046 | 0.057 | -0.011 | 0.041 | 2197 | Yes |
| ENSG00000208036 | chr7 | 99691616 | 99691697 | MIR106B | 406900 | microRNA 106b [Source:HGNC Symbol; Acc:HGNC:31495] | 2 | 1 | 0.78 | 0.81 | -0.028 | 0.029 | 2462 | No |
| ENSG00000228680 | chr7 | 43278665 | 43288867 | AC004692.4 | | | 6 | 4 | 0.71 | 0.69 | 0.018 | 0.021 | 2651 | Yes |
| ENSG00000178395 | chr1 | 223566715 | 223568812 | C1orf65 | 164127 | coiled-coil domain containing 185 [Source:HGNC Symbol; Acc:HGNC:26654] | 7 | 2 | 0.62 | 0.6 | 0.022 | 0.05 | 2871 | No |
| ENSG00000251387 | chr5 | 139152113 | 139154991 | CTB-35F21.3 | | | 1 | 1 | 0.055 | 0.047 | 0.0082 | 0.0015 | 3564 | Yes |
| ENSG00000198976 | chr1 | 1104385 | 1104467 | MIR429 | 554210 | microRNA 429 [Source:HGNC Symbol; Acc:HGNC:13784] | 2 | 2 | 0.84 | 0.87 | -0.022 | 0.0042 | 4123 | No |
| ENSG00000258412 | chr14 | 96677197 | 96681155 | RP11-404P21.5 | | | 1 | 1 | 0.82 | 0.84 | -0.018 | 0.038 | 5763 | No |
| ENSG00000247993 | chr5 | 72742184 | 72742811 | FOXD1-AS1 | | FOXD1 antisense RNA 1 [Source:HGNC Symbol; Acc:HGNC:50658] | 1 | 1 | 0.024 | 0.019 | 0.0053 | 0.021 | 6309 | No |
| ENSG00000185069 | chr12 | 53161939 | 53171129 | KRT76 | 51350 | keratin 76, type II [Source:HGNC Symbol; Acc:HGNC:24430] | 4 | 1 | 0.95 | 0.96 | -0.013 | 0.026 | 10235 | No |
| ENSG00000203942 | chr10 | 99349450 | 99350690 | C10orf62 | 414157 | chromosome 10 open reading frame 62 [Source:HGNC Symbol; Acc:HGNC:23294] | 1 | 1 | 0.95 | 0.96 | -0.011 | 0.0027 | 11576 | No |