Molecules and Cells





Supplementary Fig. S1. PCA of RNA-seq data derived from seven hepatocellular cell lines. The four cell lines that were used for identifying eRNAs are shaded with pink ellipses and were differentiated from the other three cell lines by PC1.

Identification of Novel eRNAs from HCC Ye-Eun Lee et al.



Supplementary Fig. S2. Volcano plots of the DEGs identified from four different TCGA cancer datasets. Four different TCGA RNA-seq datasets were used to identify DEGs by comparing gene expression between normal and tumor samples P < 0.05. Only upregulated (red) and downregulated (blue) eRNAs are depicted accordingly in each cancer.

Α

THUMPD3-AS1 (NR_027007.3)



Supplementary Fig. S3. Genetic structure of the two eRNAs and the ASO target location. (A) The human THUMPD3-AS1 gene is located on chromosome 3 and consists of 3 exons. The ASO for THUMPD3-AS1 targeted exon 3. (B) The human LINC01572 gene is located on chromosome 16 and consists of 6 exons. The ASO for LINC01572 targeted exon 6.

Identification of Novel eRNAs from HCC Ye-Eun Lee et al.





	FT3-7	Huh-7	Huh7.5	PLC-PRF-5	SNU182	SNU387	SNU449
Total reads	116,336,364	109,035,592	125,101,533	122,253,797	105,745,982	132,855,367	132,467,381
Reads after trimming	109,923,572	99,643,491	123,090,118	119,754,251	100,834,914	130,404,876	130,017,094
Overall read mapping rate	95.8%	90.2%	97.2%	96.9%	96.9%	97.2%	97.6%

Supplementary Table S1. RNA-seq outputs from seven hepatocellular cell lines

	FT3-7	Huh-7	Huh7.5	PLC-PRF-5	SNU182	SNU387	SNU449
Total reads							
H3K27ac	67,930,429	64,361,750	52,085,159	53,971,505	61,707,090	54,072,895	63,531,281
H34me1	80,650,123	50,464,428	52,233,147	65,339,269	72,273,443	54,795,761	60,515,029
H3	66,844,506	57,114,371	50,329,409	51,930,903	51,920,739	49,717,762	54,968,044
Reads after trimming							
H3K27ac	67,704,666	64,237,526	50,802,457	52,606,137	61,495,742	52,704,473	61,956,541
H34me1	80,514,894	50,337,160	51,058,776	63,614,983	72,150,721	53,278,934	58,929,878
H3	65,785,488	56,265,546	48,926,730	50,511,294	51,163,929	47,807,011	53,517,823
Mapping rate							
H3K27ac	76.50%	69.10%	77.00%	77.60%	74.70%	78.20%	78.70%
H34me1	74.40%	62.70%	78.60%	78.40%	74.60%	79.00%	79.40%
H3	70.30%	69.00%	73.00%	74.60%	67.20%	73.00%	75.90%

Supplementary Table S2. ChIP-seq outputs from seven hepatocellular cell lines

	FT3-7	Huh7.5	PLC-PRF-5	SNU182
Histone marks ChIP-seq				
H3K4me1	308,558	234,525	294,164	233,037
H3K27ac	64,868	255,525	212,855	74,913
Active enhancer regions				
Total	26,889	55,306	50,553	27,284
(Remove) TTS, TSS, exon of protein coding	2,746	11,557	10,070	3,325
Intergenic	8,650	15,641	14,618	6,576
non-coding RNA	15,493	28,108	25,865	17,383
Map RNA seq				
Total	505	1,162	1,383	597
Antisense	158	397	464	209
lincRNA	149	302	299	125
Others	181	427	560	249
(Remove) non eRNAs :snoRNA,rRNA,tRNA, etc.	17	36	60	14

Supplementary Table S4. The numbers of eRNAs detected in each of the four cell types

Supplementary Table S5. eRNAs commonly detected in four cell lines

antisene ACT-1923.1 chr.2154822.1 chr.2154822.4 chr.2154822.4 chr.2156822.6 chr.2156823.6 chr.2156823.6 <thch< th=""><th>Symbol</th><th>Position</th><th>FANTOM</th><th>Symbol</th><th>Position</th><th>FANTOM</th></thch<>	Symbol	Position	FANTOM	Symbol	Position	FANTOM
ALB1322:1 chr:330748-53342426 3 LINCO1876 chr:216011530-162546909 2 ALB0541: chr:3402766-5480270 LINCO1876 chr:3402766-7480270 LINCO1876 chr:3402766-74805270 LINCO1876 chr:3402766-74805270 LINCO1876 chr:3401552-144080220 chr:340157277 chr:340157727 chr:3401577277 chr:34017712-131980802 chr:34017712-131980802 chr:34017712-131980802 chr:34017713-131980808 chr:340177131313198014 chr:34017713131398014	antisense			AC114763.1	chr2:138418284-138501698	2
ALBGON1_2 chr:140259427-4027967 AC105942 chr:6509287-650927 2 AC105942_1 chr:14725694-56027 ILNC02163 chr:16109291-110410540 - SLC14A1-AS1 chr:11725664-5613027 ILNC021643 chr:1513400557-110410549029 - ALB0557.1 chr:121402881-1244030501 ILNC02106 chr:151427183-1380927 - ALB0557.1 chr:121402881-1244030501 ILNC01005 chr:151427183-13903950-13111017 23 ATPIA1-AS1 chr:115182247-116418622 AC000501.3 chr:5652008-0690409-8975727 3 ADAMTSL-AAS1 chr:123897751-12398609 2 PV11 chr:5652008-0690409-8975727 3 AC007381.1 chr:2349867.3986533 1 LINC-1515 chr:10567238-12707682.5 - AC007381.1 chr:12745534-127274843 2 AC007361.4 chr:12748531-127278843 1 AC007391.1 chr:12745534-127574623 2 AC007350.2 chr:12748051-42747444 23 AC007392.1 chr:12749514197675374623 2 AC007361.4 chr:127480514-5778452 - AC007392.	AL513327.1	chr1:33307348-33349245	3	LINC01876	chr2:156011530-156254950	2
AC10594.21 orth:9427786-948270 LINC0163 orth:942786-948270 LINC0163 orth:942786-948271-9590 AC24240.2 orth:14717277-1471508 SNH04 orth:3326552-13459828-7 J AL46657.1 orth:2102238-21125560 LINC0174 orth:3326740-216572198-15664065 T AL4622.1 orth:2102238-21125560 LINC0174 orth:332740-2157277 3 ADAMTSL-AS1 orth:110590022-15074522 AC000001 orth:3527074-2139857727 3 ADAMTSL-AS1 orth:110590022-15074522 AC40000174 orth:357704-21398577727 3 AD007381 orth:2107504175-12398867782 AC4073117 orth:22075041-23770727 3 AD0073781 orth:2107504175-12398867782 AC4073181 Orth:357704-23787727 3 AD0073781 orth:21075041-2378067 LINC01751 orth:357704-23787727 3 AD0073781 orth:21075041-2378067 LINC01756 orth:357704-23787727 3 AD0073781 orth:21072041-2378074 Orth:357704-23787777 3 AD0073781 orth:21072041-237877727 3 AD0073781	AL050341.2	chr1:40256427-40257967		AC116049.2	chr4:65998846-66150012	2
SLC 644 - AS1 ohr 11125664 5-10347055 3 LINCO 1843 ohr 5143605552 - 1034280221 - AL066537.1 ohr 121402889 - 214030001 LINCO 1006 ohr 515827102 - 13628407 - AL46552.1 ohr 21212288 - 31522585 LINCO 1006 ohr 515827102 - 1362840667 7 AL4552.1 ohr 21212288 - 31522585 LINCO 1017 chr 515827102 - 13628406 1 AL4552.1 ohr 121897751 - 1208506 2 PVT1 ohr 51580406 0007777 3 APAMTSL ALST ohr 121897751 - 21085050 2 PVT1 ohr 5157027604 - 629787825 - AC007381.1 ohr 236436873-9865343 10 LINCO 115 ohr 5687036-9878835 - AC007381.1 ohr 21697198 - 14944223 2 AC027381.1 ohr 21697198 - 1494423 - - AC007381.1 ohr 216957198 - 1494423 2 AC027381.1 ohr 21697198 - 149423 - - - - - - - - - - - - - - - - - - -	AC105942.1	chr1:94927566-94963270		LINC02163	chr5:104079911-104105403	
AC2428/2. ahr1147172771-1271508 SNH44 ahr5138271401-3382477 . AL466527.1 ahr1252288-21852865 LINCO1074 chr75657644-6382666 7 AL46528.1 ahr1251288-184384002 LINCCN174 chr75657644-6383666 1 AD001751.4 ahr1251288-184384002 LINCCN174 chr75657644-6383666 3 AD111152.4-K51 ahr11050201.71105726 AK10100.1 chr25650040-6577397 3 AD001781.4-K51 ahr11050201.71105726.12388508 2 PVT1 chr2172784533-12810125 35 AD001785.1 chr23756642-2387622 CASC19 chr31707707-31 3 AD001785.1 chr2375667-338657341 0 LINCO1515 chr3170706-83106719 1 AC001797.1 chr21795691-45915423 2 AL002031.4 chr12707869-83106719 1 AC001797.1 chr21795691-4368223 1 AL002031.4 chr2178684283726 - AC001797.1 chr21795691-43682727 1 AL002031.4 chr2178684283726 - AC001797.1 chr21725691-436827111 CASC1990	SLC16A1-AS1	chr1:112956415-113047055	3	LINC01843	chr5:134506552-134509229	
ALB0537.1 chrl 214028851.1 LINC01006 chrl 156720556 7 AL44552.4 chrl 253288.23125355 LINC01074 chrl 756375044-6643556 1 AC0018.AS1 chrl 15322185.3325235 2 LINC01003 chrl 766375044-66355727 3 ADMMTS.4.AS1 chrl 153562247-10416922 2 CASC01013 chrl 766250084-693975727 3 ADMMTS.4.AS1 chrl 153562247-1085732 2 CASC0115 chrl 861674948-9757727 3 AC0073786.1 chr2 355642-72307522 CASC0115 chrl 8617072984-122372741 3 AC003786.1 chr2 3556427314823 1 CINC01515 chrl 185720784-1237754 1 AC003786.1 chr2 355384-127314823 2 AC023531.4 chr12 4552056-6532758 . AC007378.1 chr2 1495714-14984233 3 LINC02381 chr13 3558265-643263 . AC007378.1 chr2 3579477 3 LINC02381 chr13 35582656-63326719 . AC007378.1 chr2 3579677 AL1350881 chr13 35582656-5322718 . . AC0073	AC242426.2	chr1:147172771-147211568		SNHG4	chr5:139274102-139283477	
AL4.452:1 ch123152238-231522566 LINC0174 ch7:837244-6843666 1 CCDC16:4A-S1 ch7:86723286-3340023 LINC-174 ch7:8672666523 3 ATPI-AL-S1 ch7:867266022-16672452 1 AC1008001.3 ch7:86726666523-133 3 AC071117.1 ch12:1581775-13886508 2 PVT1 ch6:8509406-9977727.3 3 AC071117.1 ch2:256422736722 CACC16 ch11:1277284-12727514 2 AC071117.1 ch2:256402737622 CACC16 ch11:277284-12727514 2 AC07310.1 ch2:246937-1472503 1 CACC16 ch11:13072068-3105719 1 AC00976.1 ch2:12745374-12714623 2 AC025031.4 ch12:26986-414477748413 - AC00978.1 ch2:369719-6146823 1 LINC00356 ch13:326815462-58822.7 - AC00983.1 ch2:16756463 1 LINC00356 ch12:7990414-479774451 4 AC00982.1 ch2:268769052290677 LINC00556 ch12:3698124-5862086962 - AC00982.1 ch13:36817126467148524248 LINC00578	AL606537.1	chr1:214028891-214030901		LINC01006	chr7:156472196-156640654	7
CDCD18-A51 chr130326186-32480025 2 LINC-PINT chr13052618-313110176 23 ADMATSLA-K51 chr1150560202-150574552 1 AP11782.1 chr3605008-66552373 3 ADAMTSLA-K51 chr1250560202-150574552 1 AP11782.1 chr3605008-66552773 3 AC074117.1 chr223756244-7797622 . CAC3C16 chr12507513-1005444-17227541 23 AC007381.1 chr23466011-5460045 1 QUMALINC chr1010057314-6075444-17227541 24 AC007384.1 chr234567145334-127144023 2 AC0207381.4 chr23456745314023 . AC0207381.4 chr23456867463851.4 . AC007384.1 chr234587476-1469394-127 15 AL139065.1 chr33286674630744 . . . AC007381.1 chr2345867476-1687476-1687729867 3 AL355916.1 chr1332868674630827.5 . . AC008025.1 chr342767476-16877729867 3 AL355916.1 chr132828637-6826798 . AC008025.1 chr3427476464746746117 2 AC0208025.1 chr14552768674521231	AL445524.1	chr1:231522388-231528556		LINC00174	chr7:66376044-66493566	1
ATP14-AS1 chr116332247-116418622 . AC000601.3 chr/685208665237 3 ADAMTSL-AS1 chr121381775-12388506 2 PVT1 chr38200409-8975772 3 AC0074117.1 chr23725646-273876522 . CASC19 chr38200409-8975772 3 AC007388.1 chr23845657-3686573 10 LINC01515 chr03856768351-21601 1 AC00381.1 chr23845657-3686573 12 RAB30-AS11 chr138270264-12787576 1 AC00391.1 chr21458384-127514623 2 AC020301.4 chr1244528856-45387168 1 AC00391.1 chr214598384-127614023 2 AC020302.1 chr1245128956-43872168 1 AC00392.1 chr214598384-127614023 2 AC020392.1 chr1245128954139-5685229 4 AC00392.1 chr214598384-253450824 2 LINC02551 chr135898139-5685289 4 AC00393.1 chr328981798 1 LINC01576 chr145378847439862 4 AC06833.1 chr328981798 1 LINC01578 chr1552981702-51282131 4 <td>CCDC18-AS1</td> <td>chr1:93262186-93346025</td> <td>2</td> <td>LINC-PINT</td> <td>chr7:130938963-131110176</td> <td>23</td>	CCDC18-AS1	chr1:93262186-93346025	2	LINC-PINT	chr7:130938963-131110176	23
ADAMUSLA-S1 chr115056022-150574552 1 AP11782-1 chr8:8050409-8975727 3 AD074117.1 chr22736574-51205804 2 PVT1 chr8:12774633-128104253 35 A0074117.1 chr22736574-52376622 . CASC19 chr8:12774633-128104417227541 23 A000738.1 chr235674-52367622 . CASC19 chr1:10072364-310924147 1 A0007374.1 chr2:1736937-110055033 1 RAB00251 chr1:13072064-3100719 1 AC007374.1 chr2:1736937-1100220-147554631 2 LAC002361 chr1:13072064-3100714 1 AC007374.1 chr2:1736927-110220-147554631 2 LAC002361 chr1:35366371-6470014 4 AC007319.1 chr2:17424421145667 3 LAL325691.1 chr1:35366371-6470014 4 AC068631.1 chr3:3257476-168774751687772586 1 LAL325891.2 chr1:455216574-2518071 5 AC068631.1 chr3:32574747-1687772598 2 LAC20863.2 chr1:455216574-52182707 5 AC068631.1 chr3:32574747-1687772986 1	ATP1A1-AS1	chr1:116392247-116418622		AC006001.3	chr7:66526088-66592397	3
PROX1-AS1 chrl 21381775-12388500 2 PVT1 chrl 2797284-129101233 35 AC074171 chrl 2358248-27387622 CASC19 chrl 2107284-127072844-127072844-12707284-12707284-12707284-12707284-12707284-1270	ADAMTSL4-AS1	chr1:150560202-150574552	1	AF117829.1	chr8:89609409-89757727	3
AC0/1417.1 ch/22736246-27867622 . CASC19 ch/10.56570338-67786815 . AC00738.1 ch/2.5466011-34680045 1 CLMALINC ch/10.56570338-07678815 . AC00738.1 ch/2.1796397-118055033 1 RAB30-AS1 ch/11.83072066-31806719 1 AC00736.1 ch/2.172465391-4127514623 2 AC027369.2 ch/12.578106714249 . AC00736.1 ch/2.1724653914-127514623 2 AC027369.2 ch/12.578106714249 . AC00736.1 ch/2.1570087-4282421 2 LINC00355 ch/13.580104-3286279 . AC00883.1 ch/3.54068243-010327466 1 AL13289.3 ch/14.557084-2280074 . AC00883.1 ch/3.540687-340674244-2116071 2 LINC00355 ch/13.5806821-4427611 . AC00883.1 ch/3.578087-42824280 2 LINC00357 ch/14.597084-23808087 . AC00882.1 ch/3.587087-42824280 2 LINC01476 ch/14.5970840-238087 . AC00882.1 ch/3.587087-42824980700 LINC01576 ch/14.5970840-2890700	PROX1-AS1	chr1:213817751-213988508	2	PVT1	chr8:127794533-128101253	35
Accor388.1 ch/2:3949687-39685343 10 LINC01515 ch/10:10037315:100454043 1 Accor330.2 ch/2:117965371-118055033 1 RAB30-AS1 ch/11:3003206-33106719 1 Accor330.4 ch/2:117965371-118055033 1 RAB30-AS1 ch/11:24038856-4412493 . Accor336.1 ch/2:14768534-12714423 2 ACCO2351.4 ch/12:671808-54142493 . Accor336.1 ch/2:16708220-187564683 12 ACCO2351.4 ch/12:7680014-79778451 4 ACCO8392.1 ch/2:678045-3947671816772966 1 AL130089.1 ch/13:639842-3805082 . ACC08832.1 ch/3:478087-42825428 2 LINC02351 ch/14:5528803-5826976 . ACC08832.1 ch/3:278084-23805086 AL1355916.1 ch/14:5528803-5826976 . ACC08832.1 ch/3:278244087 2 ACC08802.1 ch/15:37864-23805086 . ACC08832.1 ch/3:32828707.0286 3 LINC01576 ch/15:3288777.43810 . AL22208.1 ch/3:3771284 ACC08073.1 ch/15:3288777.438510 . <td>AC074117.1</td> <td>chr2:27356246-27367622</td> <td></td> <td>CASC19</td> <td>chr8:127072694-127227541</td> <td>23</td>	AC074117.1	chr2:27356246-27367622		CASC19	chr8:127072694-127227541	23
AC039310.1 cht/2:54661011-54880045 1 CLMALINC cht/1:807206-8100145015013 1 AC000976.1 cht/2:17465594-110505033 1 RABD-AS1 cht/1:807206-81001414 1 AC000736.1 cht/2:17465594-1127514623 2 AC027369.2 cht/2:54126096-414-4973 4 AC00736.1 cht/2:167003220.15764663 12 AC073569.2 cht/3:5268136-5262279 . THUMPD3-AS1 cht/2:1670032-125764663 1 AL130289.2 cht/3:5268136-5262279 . CO00985.1 cht/3:1670087-4284-211807 3 AL30289.1 cht/3:16860914-7778451 4 CO00985.1 cht/3:167087-4244-21180773 AL130289.2 cht/3:1686091 . 7 GUALAS cht/3:17244-31180773 AL302895.1 cht/3:16809173 . 7 GUALAS cht/3:17244-3118077 AC0090825.1 cht/3:1809073 . 7 GUALAS cht/3:17244-3118097 S LINCO1572 cht/3:17809773.49877140 . GUALAS cht/3:172444-3118097 S LINCO1572 cht/3:17807730477398977 <td>AC007388.1</td> <td>chr2:39436637-39665343</td> <td>10</td> <td>LINC01515</td> <td>chr10:65570338-65768835</td> <td></td>	AC007388.1	chr2:39436637-39665343	10	LINC01515	chr10:65570338-65768835	
AC009303.2 chr2:11795537-118055033 1 RABS0.AS1 chr1:38072066-83166719 1 AC007364.1 chr2:4584581-425714623 2 AC026031.4 chr1:24688864-64392125 AC007364.1 chr2:468982263 1 LAC022811 chr1:2468864-64392125 AC007364.1 chr2:46982263-7103220 15 AL139080.1 chr1:383686133-52852779 . AC0268228.1 chr3:468698-3986579 1 LINC02351 chr1:38368613-52852779 . AC0268228.1 chr3:478678478-72865 1 AL139080.1 chr1:383686133-52852779 . AC0268228.1 chr3:478678478-72865 1 AL139080.1 chr1:383686133-52852779 . AC0268228.1 chr3:478678478-72865 1 AL132989.2 chr1:45376842-53860882 . AC0268228.1 chr3:4278607478-8077286 1 AL132989.2 chr1:45376842-53860882 . AC026823.1 chr3:4278607478-8077286 1 AL132989.2 chr1:45376842-53860882 . AC028305.1 chr3:1677478-8077286 1 AL132989.2 chr1:45376842-53860882 . AC028305.1 chr3:510771280-6800852 3 LINC02310 chr1:532162777.4627131 . CIVCTR-AS1 chr3:2282863.62289007 . AC008052.1 chr1:532802779.4828701 . AL122086.1 chr3:328287071280-6800852 3 LINC01572 chr1:53280277.92889701 . AL122086.1 chr3:3282863.62289006 . LINC01572 chr1:53280277.92889701 . AL22208.1 chr3:32488.1898055 . AC008052.4 chr1:71430384.14930506 1 TRAF.9451 chr3:41480511111880576 . LINC01571 chr1:53280277.2257844 . AL3258591 chr3:414805111111880576 . LINC01571 chr1:53280277.2257844 . AC003332.1 chr3:472489.1898555 . AC00852.4 chr3:712457842 . AC003332.1 chr3:472469.1498555 . AC00852.1 chr3:2847870.1257884 . AC003332.1 chr3:472469.1498555 . AC108683 chr3:1374082.1374182.1 AC003332.1 chr3:472469.1498555 . AC108683.1 chr3:284770.1257844 . AC003332.1 chr3:472469.14986462 . EM6P1 chr3:14714114 1 AC003322.1 chr3:4754618109.2 H38555 . AC108688 chr3:1374082.1374182.4 AC009502.1 chr3:556162033.6 LA1267321.5 AC009692.1 chr3:4754618109.2 H38555 . AC009692.1 chr3:4754618109.2 H3877.7 H3877.1 AC009512.0 chr3:4561647.1 AC009512.0 chr3:456418302.4 AC109688.1 chr3:1374042.1374124.1 AC009512.1 chr3:45624577.2 AC009512.1 chr3:45624577.2 AC009512.1 chr3:456418010.2 AC009512.1 chr3:46864821667 . AC009512.1 c	AC093110.1	chr2:54661011-54680045	1	OLMALINC	chr10:100373513-100454043	1
AC010976.1 chr:127455394-127514623 2 AC02301.4 chr:124512085-46392126 . AC007319.1 chr:2147503240 15 AL130988.1 chr:25786014-75778651 4 AC007319.1 chr:2167003220 15 AL130988.1 chr:352651305-5285277 . THUMPD3-AS1 chr:352691305-628527 1 LINC00355 chr:35398837-64076011 4 AC0898201 chr:34725007-4285007 AL359616.1 chr:355281576-61858866 17 THRBAS1 chr:35288105-52288805-5229807 AC0023906.3 chr:352828707-92897714 . UBA6AS11 chr:35288300-82800060 AL1001572 chr:552828270-92897714 . THAP9AS1 chr:35284800-82800060 AL0002301 chr:57283077-228607 . . AL322084.1 chr:57284077-128606000 AL000316 chr:5728477-7286047 . . AL33494.1 chr:57284077-12860100 B AC005224.4 chr:17430325-14865055 . AL3356599.1 chr:1674910-16770237 AL3356599.1	AC009303.2	chr2:117995397-118055033	1	RAB30-AS1	chr11:83072066-83106719	1
AC007364.1 ch/2:149897186-149848233 SILNC02281 ch/2:25412098-25142098-25142093 I AC007319.1 ch/2:16903226-17503220 15 AL139088.1 ch/1:2576130-52852279 I HUMPD3-AS1 ch/3:398637.1040270 15 AL139088.1 ch/1:358637.164070011 4 AC098328.1 ch/3:49863776 1 LINC02331 ch/1:45786342-5386082 I AC086831.1 ch/3:498677786 1 AL355916.1 ch/1:45786342-5386082 I SGO-IAS1 ch/3:228850-52289067 I AL355916.1 ch/1:45786347-65122131 I GLYCTK-AS1 ch/3:228850-52289067 I AC000825.1 ch/1:52826777-28289701 I GLYCTK-AS1 ch/3:228850-82289080 B AC000524.4 ch/1:71:420354-14050505 1 THAP9-AS1 ch/4:42893009.8280098090 I LINC01578 ch/1:71:420354-14050505 1 AL0220861 ch/1:670320-17299370 I BEW ch/1:674910-16770227 3 AL0234391 ch/1:675210-1572 ch/1:675210-1572-12758642 2 AC073522.1	AC010976.1	chr2:127455394-127514623	2	AC025031.4	chr12:46388856-46392126	
AC0073919.1 chr2:187003220 12 AC073569.2 chr1:372691014-78774811 4 PCBP1-AS1 chr3:35213020 15 AL139088.1 chr3:35261305-5256227 2 AC009829.1 chr3:352813057-42635089 2 LINC00355 chr3:3589837-64076011 4 AC098929.1 chr3:35281307-4253089 2 LINC00355 chr3:3589837-64076011 4 AC098929.1 chr3:4587047424-21145967 3 AL358916.1 chr1:451870420-61658886 17 THRPARAS1 chr3:2828300-28290067 AC002306.3 chr5:3980720-29897714 - UBA6-AS1 chr4:67228300-28290069 Chr0:1572 chr6:15280207-9289701 - THAP9-AS1 chr6:19240300-14880060 Chr0:01572 chr6:171430308-1-4305605 1 AL325699.1 chr6:17224764072 33 AL325699.1 chr6:172237610472 23 AL335699.1 chr6:1724301474459409 AK000511 chr7:17340325 1 D AC000521.1 chr6:7243030 MST1L chr1:16754910-16770237 - AL3356999.1 chr	AC007364.1	chr2:149587196-149848233	3	LINC02381	chr12:54126098-54142493	
PCEPL-AS1 chr/26096228-70103220 15 AL13909.1 chr/1532651305-52652279 . AC0099321 chr/342785097-42652428 2 LINC00355 chr/35369842-358208082 . AC0068311 chr/342785097-42652428 2 LINC00355 chr/35369842-358208082 . SGO1-AS1 chr/342785097-42852428 2 LINC00757 chr/35369803-52299067 . SGO1-AS1 chr/3771280-6800952 3 LINC01578 chr/15:9807023-9877148 . UBA6-AS1 chr/3771280-6800952 3 LINC01572 chr/15:9807023-9877042 2 AL022086.1 chr/3282498-19380900 8 AC005224.4 chr/17:4730345-1430505 1 TRA7B/P2-AS1 chr/311433511-11583002 6 LINC00511 chr/3272677-2257642 2 AL02068.1 chr/317929307 21 peerdogene - AC073332.1 chr/31679320-17293057 21 peerdogene - - AC073332.1 chr/31679320-17293057 . AC07332.1 chr/3167912-121571672.1 S AC07332.1 chr/3167912-121571672.2 <td>AC007319.1</td> <td>chr2:187003220-187554663</td> <td>12</td> <td>AC073569.2</td> <td>chr12:79690144-79778451</td> <td>4</td>	AC007319.1	chr2:187003220-187554663	12	AC073569.2	chr12:79690144-79778451	4
THUMPD3-AS1 chr3:934988.9389579 1 LINC0235 chr1:353986371-44076011 4 AC098831.1 chr3:186579476-186772986 1 AL132891.2 chr1:45528033-85289158 . AC088831.1 chr3:186579476-186772986 1 AL132891.2 chr1:45528033-85289158 . SG01-AS1 chr3:24494087-24681711 2 AC02902.3 chr1:552116574-52122131 . UBA6AS1 chr3:24494087-24681711 2 AC02902.3 chr1:5920702-39877148 . UBA6AS1 chr4:67701204-8893009-8200960 LINC01578 chr1:922898701 . . THAPSAS1 chr6:19224988-1983009.0 8 AC005224.4 chr1:7:43031-75656009 . ALD305491 chr6:19224988-1983009.0 8 AC007329.1 chr2:17.43025.5 . AL386591 chr6:19224987.7 2 LINC00511 chr1:7:43031-7:56100.7 . AL385591 chr6:1923499.7 21 pseudogene . . . HOXA-AS2 chr7:19714711141 1 AC00829.1 chr1:121571892	PCBP1-AS1	chr2:69962263-70103220	15	AL139089.1	chr13:52651305-52652279	
AC098929.1 chr342785097-42852428 2 LINC02331 chr14.5376942-53850862 AC08982.1 chr3.557945-16273296 1 AL122892 chr14.5376942-53850862	THUMPD3-AS1	chr3:9349689-9398579	1	LINC00355	chr13:63986371-64076011	4
AC068631.1 chr3186579476-186772896 1 AL355916.1 chr14-55228033-56229156 SCO1-AS1 SCO1-AS1 chr32071244-211495967 3 AL355916.1 chr14-55210540-61559666 17 THRB-AS1 chr3224450872-4681711 2 AC023906.3 chr155216574-5212131	AC099329.1	chr3:42785087-42852428	2	LINC02331	chr14:53768942-53850882	
SG01-AS1 chr3:2017424-21145667 3 AL355916.1 chr4:51870640-6165806 77 THRB-AS1 chr3:20280617 . AC023006.3 chr1:539807023-99877148 . CLYCTK-AS1 chr3:52288506-52290067 . AC023006.3 chr5:59807023-99877148 . UBA6-AS1 chr4:6771220-6080052 3 LINC01572 chr1:672283017265809970 . TIAPP-AS1 chr4:18924851-115930800 8 AC005224 chr1:71303854-14308565 1 AL02068.1 chr6:114483511-115983000 6 LINC01512 chr2:271671-2271642 2 AL03549.1 chr6:145790409-14588585 . AC07529.1 chr2:10777.27161 2 AL035699.1 chr1:16754910-16770237 . Pseudogene . . HXX-AS2 chr1:2710777.27103402 3 MST1L chr1:16754910-16770237 . AC009032.1 chr3:1475211-156645205 . AC109690.1 chr3:13740823-1137408243-113740824 . AC009040.1 chr1:147950471621-165645205 . AC1200681 chr3:13740824-1137402	AC068631.1	chr3:186579476-186772986	1	AL132989.2	chr14:58288033-58289158	
THRB-AS1 chri3:24494087-24681711 2 AC039306.3 chrl5:52116574.5212313 . UBA6-AS1 chrl5:3288507-52299067 . AC090325.1 chrl5:3288277-428997148 . THAP9-AS1 chrl6:17320-68080952 3 LINCO1578 chrl5:3288277-928997148 . THAP9-AS1 chrl6:173200861 chrl5:3288277-2283017-2566009 3 AL0220861 chrl:174208384-14305055 1 TRAFEJP2-AS1 chrl:14578409-143886585 . AC073221 chrl5:1457742821327-2864472 33 AL034349.1 chrl:14578409-143886585 . AC073529.1 chrl:1084772-11111141 1 AC075021.1 chrl:1677020-1727194302 3 MST11 chrl:16754910-16770237 . HXXA-AS2 chrl:72710777-27134302 3 MST11 chrl:374082-113741254 . LINCO1004 chrl:72561121-156612201 AC1080693.1 chrl:13740823-113741254 . AC090739.1 chrl:42658172-4268301 AC1180808.1 chrl:37470821-38456013 . LINCO1004 chrl:6347950-66864804 1	SGO1-AS1	chr3:20174244-21145967	3	AL355916.1	chr14:61570540-61658696	17
CLYCTK-AS1 chr3:5228850-52299067 . AC090825.1 chr15:99807023-99877148 . THAPP-AS1 chr4:52283009-62900860 . LINC01572 chr16:722830172665009 3 AL022061 chr6:11148351-111598302 6 LINC01572 chr17:123932372840472 33 AL03349.1 chr6:1148351-111598302 6 LINC00511 chr17:722321372840472 32 AL03349.1 chr6:145998409-145886858 . AC073522.1 chr2:02547671-22576642 2 AL336699.1 chr6:145798409-145886858 . AC073522.1 chr2:02547671-22576642 2 AC0332.1 chr2:16771220-17299557 21 pseudogene - - HOXA-AS2 chr7:165013044 10 AC096821.1 chr3:0562423-30621402.6 Chr3:17876213-17976723-1767805-1 AC099793.1 chr3:17876213-17976723-1767805-1 AC099793.1 chr3:17876213-17976723-1767805-1 L AC00973.1 chr3:1245647-124698831 4 LINC01068	THRB-AS1	chr3:24494087-24681711	2	AC023906.3	chr15:52116574-52122131	
UBA6-AS1 ch/4 67701280-68080952 3 LINC01578 ch/15:282807-92899701 . THAP5-AS1 ch/61322800960 INC01572 ch/15:228307-72685009 3 AL022068.1 ch/613228301-7268501527 ch/61328309.227 33 AL034349.1 ch/611483511-111989302 ch/111989302 INC002611 ch/77.27237127.227840472 33 AL0356590.1 ch/6114836511-111989302 ch/2072529.1 ch/207252947671-22578642 2 AL356599.1 ch/611493014-118980585 AC07529.1 ch/71047771213 21 Pseudogene HXA-AS2 ch/711970237 . AC005021.1 ch/711950135-15013044 10 AC096921.1 ch/330826423-30826797 . AC009039.1 ch/7110495035-150513044 10 AC096921.1 ch/3318746061.3 . LINC01004 ch/710495035-15504205.5 AC108080.1 ch/31978213-19742540 . AC090403.1 ch/1634750-63638464 1 INC01388 ch/319778213-197627066 1 AC0304073.1 ch/10347565063634640 1 CCT679	GLYCTK-AS1	chr3:52288580-52299067		AC090825.1	chr15:99807023-99877148	
THAPP-AS1 chr/43283300-323009-323009-3 AL0220651 chr6132488-10833008 8 AC062244 chr1617223301-7265009 3 AL0220651 chr611432498-117830300 8 AC062244 chr17.7233123-72640472 33 AL0343401 chr61145799409-145886585 LINC00511 chr27.22378742 2 AL0356599.1 chr6145799409-145886585 AC073529.1 chr2104777-311111141 1 AC073332.1 chr716570320-1729337 21 pseudogene - HOXA.AS2 chr7116970320-1729337 21 pseudogene - HOXA.AS2 chr7116970320-1729337 2 BMBT1 chr1:16754910-16770237 . AC009031 chr61426851231-155645205 AC108693.1 chr3:113740823-113741224 . AC090903.1 chr612557320-46538304 EMC3.AS1 chr3:113740823-113741224 . AC09073.1 chr612565300-66364804 CCT61P3 chr3:113740823-113741224 . AC09073.1 chr1:2651231-656344950-66364804 CCT61P3 chr3:18347606-183456013 . CR121-AS1 <td< td=""><td>UBA6-AS1</td><td>chr4:67701280-68080952</td><td>3</td><td>LINC01578</td><td>chr15:92882707-92899701</td><td></td></td<>	UBA6-AS1	chr4:67701280-68080952	3	LINC01578	chr15:92882707-92899701	
AL022068.1 chr6:19324988-1933900 8 AC005224.4 chr17:1430364-14305505 1 TRAFS/P2-AS1 chr6:11483511-111598302 6 LINC002611 chr27:2231272-2264072 33 AL036599.1 chr6:125500527-125501176 LINC002611 chr27:223782-7264072 2 AC075332.1 chr7:16970320-17293657 21 pseudogene - HOXA.AS2 chr7:2710777-27134302 3 MST1L chr1:16754910-16770237 . AC005021.1 chr7:3541610-98416462 EMBP1 chr1:121519112:1517182 1 LINCO1004 chr7:16950315-150513044 10 AC09693.1 chr3:1374022-113741254 . AC009073.1 chr8:4253729-42538304 EMC3-AS1 chr3:19757213-19741254 . AC009171.5 chr1:0:5753206-96090238 13 AC132008.2 chr3:19757213-197627908 . AR01107.9 chr1:65447950-6839404 1 CC16P3 chr3:197572021-572152 . AR03102.6 chr1:27108052-7122501 AC004980.1 chr3:197578215319762425256 . CIRL-AS1 chr1:65494247.561262619 RPL13P5 chr2:867336-8684741 .	THAP9-AS1	chr4:82893009-82900960		LINC01572	chr16:72283301-72665009	3
TRAFSIP2-AS1 chrif:11483511-111598302 6 LINC00511 chr/17:2323123-72640472 33 AL0343491 chrif:12800527.128501176 . LINC00261 chr/22257671-2257842 2 AL0356599.1 chrif:167799409-145886585 . AC073529.1 chr/22576771-221708777-71734302 1 AC005021.1 chr/1574910-16770237 . chr/15754910-16770237 . AC009003.1 chr/116714950315-150613044 10 AC096921.1 chr/332062777 . AC0090403.1 chr/115611231-156645205 . AC108693.1 chr/3174264 . AC090739.1 chr/32455124253304 EMC3-AS1 chr/31740823-113741254 . AC090739.1 chr/31573205-96090238 13 AC132008.2 chr/317370213-197627906 1 AP001107.9 chr/116347950-66384040 1 CCTEP3 chr/3153026-76627882 . AC034102.6 chr/32561306-65824617 PLEKHA8P1 chr/3269730262-67627882 . AC034102.6 chr/32651340-65822163 . PLEKHA8P1 chr/32697109-5214465 .	AL022068.1	chr6:19324988-19839080	8	AC005224.4	chr17:14303854-14305505	1
AL034349.1 chr61:28500527-12850176 LINC00261 chr20:22547671-22578642 2 AL356599.1 chr21:67459400-145886858 AC073252.1 chr21:6754910-16770237 . HOXA-AS2 chr7:1670320-17299357 21 pseudogene . HOXA-AS2 chr7:1777-27134302 3 MST1L chr1:16754910-16770237 . AC005021.1 chr7:35611231-156013004 10 AC096921.1 chr3:13740254 . AC0090739.1 chr3:1556142305 AC106983.1 chr3:13740254 . . AC0909739.1 chr3:156645205 AC100688 chr3:13740254 . . AC0909739.1 chr3:156645205 AC100688 chr3:13740254 . . AC0909739.1 chr3:2567520-6 AC132008.2 chr3:13747254 . AC0112.6 chr1:2653206-66394804 1 CCTEP3 chr3:13747256 1 AP001107.9 chr1:2673206-66394804 1 CCTEP3 chr3:167792621-67321526 1 AC034102.6 chr1:2710955 chr1:26730262-167321526 1 1 1 DEU2 chr1:2710955 chr1:2	TRAF3IP2-AS1	chr6:111483511-111598302	6	LINC00511	chr17:72323123-72640472	33
AL356599.1 chr:145799409-145886585 . AC073529.1 chr:1047877-11111141 1 AC073323.1 chr:74597320-17289357 21 pseudogene . HOXA-AS2 chr:72710777-27134302 3 MSTIL chr:12151912-121571892 1 AC003021.1 chr:745611231-1564423 Corestage 1 chr:326423-30626797 . AC009331 chr:7135511231-155643205 . AC108693.1 chr:3113740823-113741254 . AC009739.1 chr:84253752-42538304 . EMED chr:3103740823-103740890 . ENTPD1-AS1 chr:1095753206-96090238 13 AC132008.2 chr:319778213-197627906 1 AC000731 chr:1763937-71-78173232 . STAG314 chr:765033654-6607413 . C1RL-AS1 chr1:7139771-78173232 . STAG314 chr:7653380-6684792 . AC090673.1 chr1:2658134-05682167 . PLEHABP1 chr:265873496-6684741 . DEU2 chr1:3619708-52194465 . AC096533.1 chr2:6573389-6684741 . AC090673.1 chr2:658144671746 . PL44573061425206441	AL034349.1	chr6:128500527-128501176		LINC00261	chr20:22547671-22578642	2
AC073332.1 ch7:16370320-17299357 21 pseudogene HOXA.AS2 ch7:2101777.2113402 3 MSTIL ch1:16754910-16770237 . AC005021.1 ch7:395416108-95416462 . EMBP1 ch1:121519112-121571892 1 LINCO1104 ch7:19490315-105013044 10 AC096921.1 ch3:3062423-30626797 . AC090739.1 ch7:35611231-15645205 . AC108693.1 ch7:31474254 . AC090739.1 ch7:1456172131-15645205 . AC108683 ch7:313474082-3113741254 . AC090739.1 ch7:15611231-15645205 . AC102008.2 ch3:197578213-197627906 1 AP001107.9 ch1:16847950-6634044 1 CCT6P3 ch7:6503305-6627906 1 AC034102.6 ch12:7108052-7122501 . AC004980.1 ch7:76543300-76627982 . AC034102.6 ch12:650330-56128611 . PLKHABP1 ch1:2:4517308-614741 . AC090673.1 ch12:65851340-65882167 . PLKHABP1 ch12:4517308-614741 . DLP2	AL356599.1	chr6:145799409-145886585		AC073529.1	chrX:10847877-11111141	1
HOXA-AS2 chr?2110777-27134302 3 MST1L chr1:16754910-16770237 . AC005021.1 chr?3541610-69451462 . EMBP1 chr1:15719112-121571892 1 LINC01004 chr?156611231-156642035 . AC108693.1 chr3:103740257 . AC00979.1 chr3:4551123-115645205 . AC108693.1 chr3:103740257 . AC09079.1 chr3:4551231-156645205 . AC108693.1 chr3:103740257 . AC09079.1 chr3:45576213-197627305 . Chr3:105776213-197627306 1 MIR111.211.211 chr3:113741254 . <t< td=""><td>AC073332.1</td><td>chr7:16970320-17299357</td><td>21</td><td>pseudogene</td><td></td><td></td></t<>	AC073332.1	chr7:16970320-17299357	21	pseudogene		
AC005021.1 chr3:95416108-95416462 . EMBP1 chr1:121519112-121571892 1 LINC01004 chr7:149450315-105013044 10 AC0096921.1 chr3:113740823-113741254 . AC0090739.1 chr3:1455611231-155645205 . AC108693.1 chr3:13740823-113741254 . AC090739.1 chr3:245237529-42538304 . EMC3-AS11 chr3:996893-10006990 . MR18142HG chr9:1245548467-124698631 4 LINC00888 chr3:197578213-197627906 1 AP001107.9 chr1:65753206-96090238 13 AC132008.2 chr3:197578213-197627906 1 AC034102.6 chr1:25612035-66128404 1 CCTGF93 chr3:6774783 . AC034102.6 chr12:56120335-56129519 . RAC044980.1 chr7:75649360-76627882 . AC090673.1 chr12:56120335-561295170 8 AC0094933.1 chr12:927235-9313241 . STARD13-AS chr15:581452247-6301589 1 UBE202P2 chr15:3251472-32416 . USP3-AS1 chr15:5826556288 5 UBE202P2 chr16:7010751-70065945 . Q058742.1 chr15:69841	HOXA-AS2	chr7:27107777-27134302	3	MST1L	chr1:16754910-16770237	
LLINC01004 chr7:14950315-105013044 10 AC096921.1 chr3:30626423-30626797 . AC090739.1 chr3:45537529-42538304 . EMC3-AS1 chr3:9986893-10006990 . MIR181A2HG chr9:124658467-124698631 4 LINC00888 chr3:183447608-183456013 . ENTPD1-AS1 chr10:9575320-3050-69090238 13 AC132008.2 chr3:197578213-197627906 1 AP001107.9 chr11:6837950-68364804 1 CCT6P3 chr7:65038354-56074713 . KCTD21-AS1 chr12:710052-7122501 . AC004980.1 chr7:75649380-6884741 . C1RL-AS1 chr12:710052-7122501 . AC004980.1 chr7:75649380-6884741 . AC090673.1 chr12:6512003-56129619 . RPL13P5 chr12:687389-6884741 . AC090673.1 chr12:6512003-56129619 . RPL13P5 chr12:687389-6884741 . DLEU2 chr13:49862552-50125720 8 AC009533.1 chr12:9277235-9313241 . STARD13-AS chr13:33180401-33281584 9 MRPS31P5 chr13:52167709-52194465 . STARD13-AS1 chr15:6563260321581 1 AC104046.1 chr15:58415228-5614563 . USP3-AS1 chr15:6684108-67065268 5 UBE2Q2P1 chr15:82356142-82420075 . AC095742.1 chr15:6684108-67065268 5 UBE2Q2P1 chr15:84526781-84571216 . UBE7-AS1 chr15:7461265-74481302 . PDXDC2P chr16:7010751-70065945 1 . AC005921.2 chr17:375693448-5005849 . *SIN COX10-AS1 chr15:7461265-74481302 . PDXDC2P chr16:1124733-61125202 . AP005899.1 chr15:7461265-74481302 . PDXDC2P chr16:1124733-61125202 . AP005899.1 chr15:7461265-7481302 . PDXDC2P chr16:7010751-70065945 1 . AC005921.2 chr17:375683448-500544 . AP005899.1 chr18:9112404-9115877 . THRB-IT1 chr3:24455136-24459434 . SNHG22 chr18:9112404-9115877 . THRB-IT1 chr3:24455136-24459434 . SNHG22 chr18:9814023-9881059 1 ST7-OT4 chr17:10766845770684527 . AP005899.1 chr18:9112404-9115877 . THC2R-AS1 chr19:4682199-44718759 4 AC0090181.2 chr15:7067654-770068595 . SDCDP2-AS1 chr19:4632199-44718759 4 AC0090181.2 chr15:7068352 . SDCDP2-AS1 chr19:4632199-44718759 4 AC0090181.2 chr15:7068357 . SDCDP2-AS1 chr19:468205-138734 6 AC0090483.2 chr2:230421206-30421536 . Z39390.2 chr2:22800683-28848559 5 *SON TTC22-AS163.1 chr1:484092896.48559 5 *SON AC245100.4 chr1:484092896.48559 5 *SON AC245100.4 chr1:484092896.48559 5 *SON AC245755.1	AC005021.1	chr7:95416108-95416462		EMBP1	chr1:121519112-121571892	1
AC009403.1 chr:155611231-155645205 AC108093.1 chr:113740823-113741254 . AC090739.1 chr:255645205 EMC3-AS1 chr:3118740823-113741254 . MIR181A2HG chr:312572942538304 EMC3-AS1 chr:319775213-197627006 1 MIR181A2HG chr:1095753206-96990238 13 AC132008.2 chr:319775213-197627906 1 AP001107.9 chr1:6837950-6634604 1 CCTRP3 chr:5639384-65074713 . CTRL-AS1 chr1:78139771-78175233 . STAG3L4 chr:765039364-65074713 . AC034102.6 chr1:2:65120033-56129619 . RPL13P5 chr1:2:6873389-6884741 . AC034102.6 chr1:2:65851340-65882167 . PLEKHABP1 chr1:2:4573064-45216041 1 DLEU2 chr1:3:83180401-33281584 9 MRPS31P5 chr1:3:82415633 . USP3-AS1 chr1:5:85415228-5012720 8 AC104046.1 chr1:5:82415633 . USP3-AS1 chr1:5:854515228-201270 8 AC104046.1 chr1:5:824564363 . USP3-AS1 chr1:5:86984108-67065268 UBE202P2 chr1:5:8245615633 .	LINC01004	chr7:104950315-105013044	10	AC096921.1	chr3:30626423-30626797	
AC090739.1 chr8.42537529-42538304 EMC3.AS1 chr3.9968093-10006990 . MIR181A2HG chr3.126546467-124696631 4 LINC00888 chr3.197578213-197627906 1 ENTPD1-AS1 chr10.95753206-96090238 13 AC132008.2 chr3.197578213-197627906 1 AP001107.9 chr11.7613971-78175323 STAG3L4 chr7.6503854-65074713 . CTD21-AS1 chr12.7108052-7122501 AC004980.1 chr7.76549360-76827982 . AC034102.6 chr12.656120033-66129619 PLEKHABP1 chr12.6873389-6884741 . AC090673.1 chr12.6561340-65882167 PLEKHABP1 chr12.9277235-9313241 . STARD13-AS chr13.33180401-33281584 9 MRPS31P5 chr13.92616709-52194465 . PSMA3-AS1 chr14.58265365-58298134 1 AC104046.1 chr15.8241524834 . UBP3-AS1 chr15.63544247-63001589 1 UBE202P1 chr15.8245148-2470533 . UBP3-AS1 chr15.7461265-74481302 PDXDC2P chr16.70010751-70065945 1 UBP2-AS1 chr15.7467678-14069495 Z AC096947.1 chr16.17047564776842049	AC009403.1	chr7:155611231-155645205		AC108693.1	chr3:113740823-113741254	
MIR181A2/HG chr3:124658467-124698631 4 LINC00888 chr3:183447608-1834450013 . ENTPD1-AS1 chr10:95753206-96090288 13 AC132008.2 chr3:19578213-197627906 1 AP001107.9 chr11:66347950-66364804 1 CCT6P3 chr7:65038354-65074713 . KCTD21-AS1 chr11:78139771-78175323 . STAG3L4 chr7:76549360-76627982 . AC034102.6 chr12:56120033-56129619 . RPL13P5 chr12:6873389-6884741 . AC034102.6 chr12:56512006552720 8 AC009533.1 chr12:357329-313241 . DLEU2 chr13:s92852-50125720 8 AC009533.1 chr12:357329-3913241 . STARD13-AS chr13:s3180401-33281584 9 MRPS31P5 chr13:s5216770-52194465 . USP3-AS1 chr15:82542427-6361589 1 UBE202P2 chr15:82541542.8422075 . AC087482.1 chr15:66984108-67065268 5 UBE202P1 chr15:825412.8422075 . AC087482.1 chr15:66984427-6360519 1 BTC7010751-70065945	AC090739.1	chr8:42537529-42538304		EMC3-AS1	chr3:9986893-10006990	
ENTPD1-AS1 chr10:9575206-96090238 13 AC132008.2 chr3:197578213-197627906 1 AP001107.9 chr1:16347950-66364804 1 CT6P3 chr3:6503854-65074713 . KCTD21-AS1 chr1:75139771-78175323 . STAG3L4 chr7:7502621-67321526 1 C1RL-AS1 chr1:75139771-78175323 . RQ004980.1 chr7:7643980-76627882 . AC034102.6 chr12:56120033-56129619 . RPL13P5 chr12:45173084-45216041 1 DLEU2 chr13:4982555-50125720 8 AC0090533.1 chr12:9277235-9313241 . STARD13-AS chr13:53180401-33281584 9 MRPS31P5 chr13:52167709-52194465 . STARD13-AS1 chr15:6354102-536142-47-63601589 1 UBE202P2 chr15:82455614-82420075 . AC087482.1 chr15:66984108-67065268 5 UBE202P1 chr15:8245678-84240075 . AC005921.2 chr15:76478-14069495 2 AC096947.1 chr15:70065947 . AP005899.1 chr18:4981402-49115877 THRB-T1 chr3:24455136-244	MIR181A2HG	chr9:124658467-124698631	4	LINC00888	chr3:183447608-183456013	
AP001107.9 chr1:68347950-68384804 1 CCTPP3 chr7:75038354-65074713 . KCTD21-AS1 chr1:7813971-78175323 . STAG314 chr7:75030521-652782 . AC034102.6 chr1:2:5120033-56129619 . AC004980.1 chr7:75649360-76527982 . AC030673.1 chr1:2:65851340-65882167 . PLEKHA8P1 chr1:2:45173064-45216041 1 DLEU2 chr1:3:33180401-33281584 9 MRPS31P5 chr1:3:52167709-52194465 . PSMA3-AS1 chr1:5:65462427-63601589 1 UBE202P2 chr1:3:82456781-84571216 . USP3-AS1 chr1:5:66984108-67065268 5 UBE202P1 chr1:6:7001751-70065945 1 AC005921.2 chr1:7:56093448-50695449 . *SIN . . COX10-AS1 chr1:8:112404-9115877 . THRB-IT1 chr3:6112657444 . SNHG22 chr1:8:49814023-49851059 1 ST7-OT4 chr1:1:10953899-117098806 4 AC2043964.2 chr1:8:4689803-2884851059 1 AC0049181.2 chr1:5:7067654-77068325 . SNHG22 chr18:49814023-49851059 1 <td>ENTPD1-AS1</td> <td>chr10:95753206-96090238</td> <td>13</td> <td>AC132008.2</td> <td>chr3:197578213-197627906</td> <td>1</td>	ENTPD1-AS1	chr10:95753206-96090238	13	AC132008.2	chr3:197578213-197627906	1
KCTD21-AS1 chr1:78139771-78175223 . STAG31.4 chr7:67302621-67321526 1 C1RL-AS1 chr1:76130262-7122501 . AC004980.1 chr7:76549360-76627982 . AC034102.6 chr12:56120033-66129619 . RPL13P5 chr12:6673389-6884741 . AC034102.6 chr12:56120033-66129619 . RPL13P5 chr12:6673389-6884741 . AC034102.6 chr13:4982552-50125720 8 AC009533.1 chr12:9277235-9313241 . STARD13-AS chr13:33180401-33281584 9 MRPS31P5 chr15:85415228-68415633 . USP3-AS1 chr15:63541424-63601589 1 UBE2Q2P2 chr15:82355142-82420075 . AC087482.1 chr15:66984496-5065268 5 UBE2Q2P1 chr15:84256781-84571216 . UBL7-AS1 chr15:756478-410069495 2 AC096947.1 chr1:61124733-61125202 . AP005899.1 chr18:9112404-9115877 . THRB-IT1 chr3:24455136-24459434 . SNHG22 chr18:49814023-49851059 1 ST-OT4 chr17:17067634-77068325 . SDCBP2-AS1 chr2:2791376-1378734 <td>AP001107.9</td> <td>chr11:66347950-66364804</td> <td>1</td> <td>CCT6P3</td> <td>chr7:65038354-65074713</td> <td></td>	AP001107.9	chr11:66347950-66364804	1	CCT6P3	chr7:65038354-65074713	
C1RL-AS1 chr12:7108052-7122501 . AC004980.1 chr7:76549360-76627982 . AC034102.6 chr12:6120033-56129619 . RPL13P5 chr12:6873389-6884741 . AC090673.1 chr12:65851340-65882167 . PLEKHA8P1 chr12:45173064-45216041 1 DLEU2 chr13:49982552-50125720 8 AC009533.1 chr12:9277235-9313241 . STARD13-AS chr13:521667709-52194465 . PSMA3-AS1 chr16:56544265365-56298134 1 AC104046.1 chr15:82455142-82420075 . USP3-AS1 chr15:63544247-63601589 1 UBE2Q2P2 chr15:82355142-82420075 . AC087482.1 chr15:6461265-74481302 . PDXDC2P chr16:70010751-70065945 1 AC005921.2 chr17:13756478-14069495 2 AC096947.1 chr12:12733-61125202 . AP005899.1 chr18:911240-9115877 . THRB-IT1 chr3:24455136-24459434 . AC243964.2 chr18:481023-48961059 1 ST7-OT4 chr15:77067654-77068325 . SDCBP2-AS1 chr20:1325405-1378734 6 AC090181.2 chr15:77067654-77068325	KCTD21-AS1	chr11:78139771-78175323	•	STAG3L4	chr7:67302621-67321526	1
AC034102.6 chr12:56120033-56129619 . RPL13P5 chr12:673389-6884741 . AC090673.1 chr12:6551340-65882167 . PLEKHA8P1 chr12:45173064-45216041 1 DLEU2 chr13:4982552-50125720 8 AC009533.1 chr12:9277235-9313241 . STARD13-AS chr13:33180401-33281584 9 MRPS31P5 chr13:62167709-52194465 . VSP3-AS1 chr15:63544247-63081589 1 UBE2Q2P2 chr15:8256781-84571266 . AC087482.1 chr15:669844108-67065268 5 UBE2Q2P1 chr15:84526781-84571216 . AC005921.2 chr15:70693448-506995449 *SIN COX10-AS1 chr17:13756478-14069495 2 AC096947.1 chr16:1010751-700659445 . SNHG22 chr18:49814023-49851059 1 ST7-OT4 chr15:706764-77068325 . SDCBP2-AS1 chr2:2800683-2884559 5 'SON . . . TTC28-AS1 chr2:245080-47739635 4 AC019080.1 chr2:177283508-177392691 1 AC243964.2 chr18:49814023-498651059 <	C1RL-AS1	chr12:7108052-7122501		AC004980.1	chr7:76549360-76627982	
AC090673.1 chr12:65851340-65882167 PLEKHA8P1 chr12:45173064-45216041 1 DLEU2 chr13:4982552-50125720 8 AC009533.1 chr12:9277235-9313241 . STARD13-AS chr13:33180401-33281584 9 MRPS31P5 chr13:5216709-52194465 . PSMA3-AS1 chr15:6354427-63601589 1 UBE202P2 chr15:85415228-85415633 . AC087482.1 chr15:66984108-67065268 5 UBE202P2 chr15:84526781-84571216 . AC005921.2 chr17:50693448-50695449 PDXDC2P chr16:17010751-70065945 1 AC005921.2 chr18:7461265-7481302 PDXDC2P chr16:17010751-70065945 1 AC005921.2 chr18:7478-14069495 2 AC096947.1 chr16:17010751-70065944 . SNHG22 chr18:49814023-49851059 1 ST7-OT4 chr16:17067654-77068325 . SDECP2-AS1 chr12:45313.24495447 6 AC090181.2 chr17:116953899-117098806 4 AC243964.2 chr19:44632199-44718759 4 AC090181.2 chr12:177283081-177068325 . SDCBP2-AS1 chr2:27919376-28008581 1 AC019080	AC034102.6	chr12:56120033-56129619	•	RPL13P5	chr12:6873389-6884741	
DLEU2 chrl3:4992552-50125720 8 AC009533.1 chrl2:9277255-9313241 . STARD13-AS chrl3:33180401-33281584 9 MRPS31P5 chrl3:52167709-52194465 . PSMA3-AS1 chrl4:56265365-58298134 1 AC104046.1 chrl5:65415228-85415633 . USP3-AS1 chrl5:6544247-63601589 1 UBE202P2 chrl5:65415228-85415633 . AC005921.2 chrl7:50693448-50695449 . PDXDC2P chrl6:7010751-70065945 1 AC005921.2 chrl7:13756478-14069495 2 AC0966947.1 chrl3:124733-61125202 . AP005899.1 chrl8:49814023-49851059 1 STT-OT4 chr1:110453899-117098806 4 AC243964.2 chrl9:44632199-44718759 4 AC090181.2 chrl5:77067654-77068325 . SDCBP2-AS1 chr2:1328406432496-1378734 6 AC004982.4 chr2:17728308-177392691 1 AC0231533.1 chr2:2800683-2848559 5 "SON . . . IIncRNA . AC019080.1 chr2:17728308-177392691	AC090673.1	chr12:65851340-65882167	•	PLEKHA8P1	chr12:45173064-45216041	1
STARD13-AS chr13:33180401-33281584 9 MRPS31P5 chr13:52167709-52194465 . PSMA3-AS1 chr14:58265365-58298134 1 AC104046.1 chr15:83415228-85415633 . USP3-AS1 chr15:63544247-63601589 1 UBE202P2 chr15:835142-82420075 . AC087482.1 chr15:74461265-74481302 . PDXDC2P chr16:70010751-70065945 1 UBE3 chr15:7176643748-14069495 2 AC096947.1 chr16:1124733-61125202 . AP005899.1 chr18:9112404-9115877 . THRB-IT1 chr3:24455136-24459434 . SNHG22 chr18:49814023-49851059 1 ST7-OT4 chr15:77067654-77068325 . AC243964.2 chr19:44632199-44718759 4 AC090181.2 chr15:77067654-77068325 . SDCBP2-AS1 chr20:1325405-1378734 6 A204832.4 chr21:77283508-177392691 1 AC23153.1 chr2:27919376-28008581 1 AC019080.1 chr2:177283508-177392691 1 AL445686.2 chr1:4538802-24556024 1 DANCR	DLEU2	chr13:49982552-50125720	8	AC009533.1	chr12:9277235-9313241	
PSMA3-AS1 chr14:58265365-58298134 1 AC 0104046.1 chr15:8415228-85415633 . USP3-AS1 chr15:63544247-63601589 1 UBE2Q2P2 chr15:82355142-82420075 . AC087482.1 chr15:66984108-67065268 5 UBE2Q2P1 chr15:8426781-84571216 . UBL7-AS1 chr15:774661265-74481302 . PDXDC2P chr16:70010751-70065945 1 AC005921.2 chr17:13756478-14069495 2 AC096947.1 chr16:1124733-61125202 . AP005899.1 chr18:49814023-49851059 1 ST7-OT4 chr7:116953899-117098806 4 AC243964.2 chr18:49814023-49851059 1 ST7-OT4 chr2:77067654-77068325 . SDCBP2-AS1 chr2:22800683-28848559 5 *SON * * TTC28-AS1 chr2:27919376-28008581 1 AC019080.1 chr2:177283508-177392691 1 AC231533.1 chr1:48298963-48737163 2 AC007066.2 chr9:122937623-122940333 . IincRNA Not assigned AL445686.2 chr1:24538802-24556024 1 <	STARD13-AS	chr13:33180401-33281584	9	MRPS31P5	chr13:52167709-52194465	
USP3-AS1 chr15:63544247-63601589 1 UBE2Q2P2 chr15:82355142-82420075 . AC087482.1 chr15:66984108-67065268 5 UBE2Q2P1 chr15:84526781-84571216 . UBL7-AS1 chr15:74461265-74481302 PDXDC2P chr16:70010751-70065945 1 AC005921.2 chr17:50693448-50695449 . *SIN - - COX10-AS1 chr17:13756478-14069495 2 AC096947.1 chr16:124733-61125202 . AP005899.1 chr18:9112404-9115877 . THRB-IT1 chr3:24455136-24459434 . SNHG22 chr18:49814023-49851059 1 ST7-OT4 chr1:16953899-11708806 4 AC243964.2 chr19:44632199-44718759 4 AC090181.2 chr15:77067654-77068325 . SDCBP2-AS1 chr2:1325405-1378734 6 AC04832.4 chr2:230421206-30421536 . Z93930.2 chr2:228008633-28848559 5 *SON . . . TTC28-AS1 chr2:27919376-28008581 1 AC019080.1 chr2:177283508-177392691 1	PSMA3-AS1	chr14:58265365-58298134	1	AC104046.1	chr15:85415228-85415633	
AC08/482.1 chr15:66984108-6/065268 5 UBE/2Q2P1 chr15:3426/81-845/1216 . UBL7-AS1 chr15:74461265-74481302 . PDXDC2P chr16:70010751-70065945 1 AC005921.2 chr17:13756478-14069495 2 AC096947.1 chr16:1124733-61125202 . AP005899.1 chr18:9112404-9115877 . THRB-IT1 chr3:24455136-24459434 . SNHG22 chr18:49814023-49851059 1 ST7-OT4 chr7:116953899-117098806 4 AC243964.2 chr19:44632199-44718759 4 AC090181.2 chr2:7067654-77068325 . SDCBP2-AS1 chr20:1325405-1378734 6 AC004832.4 chr22:30421206-30421536 . Z3930.2 chr22:28008683-28848559 5 b SON . . . TTC28-AS1 chr2:2:7919376-28008581 1 AC019080.1 chr2:177283508-177392691 1 AC231533.1 chr1:48698963-48737163 2 AC007066.2 chr9:122937623-122940333 . IincRNA Not assigned AL445686.2 chr1:168400829-168495685 4 Z94721.2 chr6:166999405-167139141	USP3-AS1	chr15:63544247-63601589	1	UBE2Q2P2	chr15:82355142-82420075	
UBL7-AS1 Chr15:74461265-74851302 PDXDC2P Chr16:70010751-70065945 1 AC005921.2 chr17:50693448-50695449 *SIN -	AC087482.1	chr15:66984108-67065268	5	UBE2Q2P1	chr15:84526781-84571216	;
AC005921.2 chr17:50693448-50695449 . SIN COX10-AS1 chr17:13756478-14069495 2 AC096947.1 chr16:1124733-61125202 . AP005899.1 chr18:9112404-9115877 . THRB-IT1 chr3:24455136-24459434 . SNHG22 chr18:49814023-49851059 1 ST7-OT4 chr7:116953899-117098806 4 AC243964.2 chr19:44632199-44718759 4 AC090181.2 chr15:77067654-77068325 . SDCBP2-AS1 chr20:1325405-1378734 6 AC004832.4 chr22:30421206-30421536 . Z93930.2 chr22:28800683-28848559 5 bSON - - . TTC28-AS1 chr22:7919376-28008581 1 AC019080.1 chr2:177283508-177392691 1 AC231533.1 chr2:2:7919376-28008581 1 AC007066.2 chr9:122937623-122940333 . IincRNA Not assigned - - - - - AL45686.2 chr1:458400829-168495685 4 Z94721.2 chr6:166999405-167139141 11 LINC01138 chr1:148290889-148519604 BMS1P4 chr10:73699151-73730487	UBL7-AS1	chr15:74461265-74481302	•	PDXDC2P	chr16:/0010/51-/0065945	1
COX10-AS1 chr1:/:13756478-14069495 2 AC096947.1 chr1:124733-6112502 1 AP005899.1 chr18:9112404-9115877 THRB-IT1 chr3:24455136-24459434 . SNHG22 chr18:4914023-49851059 1 ST7-OT4 chr7:116953899-117098806 4 AC243964.2 chr19:44632199-44718759 4 AC090181.2 chr15:77067654-77068325 . SDCBP2-AS1 chr20:1325405-1378734 6 AC0404832.4 chr22:30421206-30421536 . Z93930.2 chr22:28800683-28848559 5 *SON - . TTC28-AS1 chr22:27919376-28008581 1 AC019080.1 chr2:177283508-177392691 1 AC231533.1 chrX:48698963-48737163 2 AC007066.2 chr9:122937623-122940333 . IincRNA Not assigned AL445686.2 chr1:148698896-186495685 294721.2 chr6:166999405-167139141 11 LINC01138 chr1:148290889-148519604 4 BMS1P4 chr1:375549773-75807120 9 AC245100.4 chr1:16618253-16657232 AL13778	AC005921.2	chr17:50693448-50695449		SIN		
AP005899.1 chr18:9112404-9115877 Intel111 chr3:24459136-24459134 I SNHG22 chr18:49814023-49851059 1 ST7-OT4 chr7:116953899-117098806 4 AC243964.2 chr19:44632199-44718759 4 AC090181.2 chr15:77067654-77068325 . SDCBP2-AS1 chr20:1325405-1378734 6 AC004832.4 chr22:30421206-30421536 . Z93930.2 chr22:28800683-28848559 5 *SON - . . TTC28-AS1 chr22:7919376-28008581 1 AC019080.1 chr2:177283508-177392691 1 AC231533.1 chrX:48698963-48737163 2 AC007066.2 chr9:122937623-122940333 . IincRNA Not assigned AL445686.2 chr1:124538802-24556024 1 DANCR chr4:52712404-52720351 . AL023755.1 chr1:168400829-168495685 4 Z94721.2 chr6:166999405-167139141 11 LINC01138 chr1:148290889-148519604 4 BMS1P4 chr1:0:73699151-73730487 . CROCCP2 chr1:16618253-16657232 AL137782.1 chr1:17:69976297-70065948 1	COX10-AS1	chr17:13756478-14069495	2	AC096947.1	CHF1:01124733-01125202	
SNRG22 chr18:49814023-49851059 1 S17-014 chr17:119933895-1170938060 4 AC243964.2 chr19:44632199-44718759 4 AC090181.2 chr15:77067654-77068325 . SDCBP2-AS1 chr20:1325405-1378734 6 AC004832.4 chr22:30421206-30421536 . Z93930.2 chr22:28800683-28848559 5 *SON * . . TTC28-AS1 chr22:27919376-28008581 1 AC019080.1 chr2:177283508-177392691 1 AC231533.1 chrX:48698963-48737163 2 AC007066.2 chr9:122937623-122940333 . IincRNA Not assigned AL445686.2 chr1:148400829-168495685 4 Z94721.2 chr6:166999405-167139141 11 LINC01138 chr1:148290889-148519604 4 BMS1P4 chr10:73699151-73730487 . CROCCP2 chr1:16618253-16657232 . AL137782.1 chr13:75549773-75807120 9 AC245100.4 chr1:148402516-148432545 . AC009022.1 chr16:68976297-70065948 1 AC0090141.2 chr2:87454781-87636740	AP005899.1	chr18:9112404-9115877	;		CNF3:24455136-24459434	
AC243964.2 chrl9:44632199-44/18/59 4 AC090161.2 chrl9:1707/634-77063325 . SDCBP2-AS1 chr20:1325405-1378734 6 AC004832.4 chr22:30421206-30421536 . Z93930.2 chr22:28800683-28848559 5 *SON *SON . TTC28-AS1 chr22:27919376-28008581 1 AC019080.1 chr2:177283508-177392691 1 AC231533.1 chr2:27919376-28008581 1 AC007066.2 chr9:122937623-122940333 . IincRNA Not assigned AL445686.2 chr1:24538802-24556024 1 DANCR chr4:52712404-52720351 . AL023755.1 chr1:168400829-168495685 4 Z94721.2 chr6:166999405-167139141 11 LINC01138 chr1:148290889-148519604 4 BMS1P4 chr10:73699151-73730487 . CROCCP2 chr1:16818253-16657232 . AL137782.1 chr13:75549773-75807120 9 AC245100.4 chr1:148402516-148432545 . AC009022.1 chr16:69976297-70065948 1 AC0090141.2 chr2:36354749-36355114 . AC06815	SNHG22	chr18:49814023-49851059	1	517-014	CNF7:116953899-117098806	4
SDCBP2-AS1 Chr20:1325405-1378734 6 ACC04432.4 Chr22:30421206-30421536 . Z93930.2 chr22:28800683-28848559 5 *SON *SON 1 AC019080.1 chr2:177283508-177392691 1 AC231533.1 chr22:27919376-28008581 1 AC019080.1 chr2:177283508-177392691 1 AC231533.1 chr2:27919376-28008581 2 AC007066.2 chr9:122937623-122940333 . IincRNA Not assigned AL445686.2 chr1:24538802-24556024 1 DANCR chr4:52712404-52720351 . AL023755.1 chr1:168400829-168495685 4 Z94721.2 chr6:166999405-167139141 11 LINC01138 chr1:148290889-148519604 4 BMS1P4 chr10:73699151-73730487 . CROCCP2 chr1:16618253-16657232 AL137782.1 chr13:75549773-75807120 9 AC245100.4 chr1:148402516-148432545 AC009022.1 chr16:69976297-70065948 1 AC009414.2 chr2:36354749-36355114 AC068152.1	AC243964.2	cnr19:44632199-44718759	4	AC090181.2	cill 15.77007054-77006525	·
Z 93930.2 chr22:28800683-28848559 5 SON TTC28-AS1 chr22:27919376-28008581 1 AC019080.1 chr2:177283508-177392691 1 AC231533.1 chr2:27919376-28008581 1 AC019080.1 chr2:177283508-177392691 1 AC231533.1 chr2:450800683-2848659 2 AC007066.2 chr9:122937623-122940333 . lincRN Not assigned Not assigned . . . AL445686.2 chr1:148400829-168495685 4 Z94721.2 chr6:166999405-167139141 11 LINC01138 chr1:148290889-148519604 4 BMS1P4 chr10:73699151-73730487 . CROCCP2 chr1:16618253-16657232 . AL137782.1 chr13:75549773-75807120 9 AC245100.4 chr1:148402516-148432545 . AC009022.1 chr16:69976297-70065948 1 AC009414.2 chr2:87454781-87636740 3 AC090181.3 chr17:46984045-47100323 1 CYTOR chr2:87454781-87636740 3 AC090181.3 chr16:1688355-1690536 1	SDCBP2-AS1	cnr20:1325405-1378734	6	AC004832.4	Chr22:30421206-30421536	
h1C28-AS1 chr22:17919376-2800881 1 AC019080.1 chr2:17/283306-177392691 1 AC231533.1 chr2:27919376-2800881 1 AC019080.1 chr2:17/283306-177392691 1 JincRNA Not assigned Not assigned . . AL445686.2 chr1:24538802-24556024 1 DANCR chr4:52712404-52720351 . AL023755.1 chr1:168400829-168495685 4 Z94721.2 chr6:166999405-167139141 11 LINC01138 chr1:148290889-148519604 4 BMS1P4 chr10:73699151-73730487 . CROCCP2 chr1:16618253-16657232 . AL137782.1 chr13:75549773-75807120 9 AC245100.4 chr1:148402516-148432545 . AC009022.1 chr16:69976297-70065948 1 AC009414.2 chr2:36354749-36355114 . AC068152.1 chr17:46984045-47100323 1 CYTOR chr2:87454781-87636740 3 AC090181.3 chr16:1688355-1690536 . MIR4435-2HG chr2:11036776-111523376 11 AL031009.1 chr16:1688355-1690536	293930.2	chr22:28800683-28848559	5			4
ACC21533.1 CHIX.4869896348137163 2 AC007060.2 CHI9.122937625-122940333 1 lincRNA Not assigned Not assigned	11C28-AS1	Chr22:27919376-28008581	1	AC019080.1	CHF2: 177283508-177392691	I
AL445686.2 chr1:24538802-24556024 1 DANCR chr4:52712404-52720351 . AL023755.1 chr1:168400829-168495685 4 Z94721.2 chr6:166999405-167139141 11 LINC01138 chr1:148290889-148519604 4 BMS1P4 chr0:173699151-73730487 . CROCCP2 chr1:16618253-16657232 . AL137782.1 chr1:375549773-75807120 9 AC245100.4 chr1:148402516-148432545 . AC009022.1 chr16:69976297-70065948 1 AC009414.2 chr2:36354749-36355114 . AC068152.1 chr17:46984045-47100323 1 CYTOR chr2:87454781-87636740 3 AC090181.3 chr16:1688355-1690536 . MIR4435-2HG chr2:111036776-111523376 11 AL031009.1 chr16:1688355-1690536 .	AC231533.1	CHFX:48098903-48737 103	2	AC007068.2	CIII9.122937023-122940333	·
AL443000.2 CITT:24330002-24330024 I DANCK CIT4:32/12404-52/20351 . AL023755.1 chr1:168400829-168495685 4 Z94721.2 chr6:166999405-167139141 11 LINC01138 chr1:148290889-148519604 4 BMS1P4 chr0:73699151-73730487 . CROCCP2 chr1:16618253-16657232 . AL137782.1 chr13:75549773-75807120 9 AC245100.4 chr1:148402516-148432545 . AC009022.1 chr16:69976297-70065948 1 AC009414.2 chr2:87454781-87636740 3 AC090181.3 chr15:77063397-77064910 . VIR4435-2HG chr2:111038776-111523376 11 AL031009.1 chr16:1688355-1690536 .		obr1:34539803 34550024	1		obr/1.52712/04 52720254	
ALU23735.1 Chr1:108400829-108490685 4 294721.2 Chr0:1069999405-167139141 11 LINC01138 chr1:148290889-148519604 4 BMS1P4 chr0:73699151-73730487 . CROCCP2 chr1:16618253-16657232 . AL137782.1 chr1:375549773-75807120 9 AC245100.4 chr1:148402516-148432545 . AC009022.1 chr16:69976297-70065948 1 AC009414.2 chr2:87454781-87636740 . AC068152.1 chr17:46984045-47100323 1 CYTOR chr2:87454781-87636740 3 AC090181.3 chr16:1688355-1690536 . MIR4435-2HG chr2:111038776-111523376 11 AL031009.1 chr16:1688355-1690536 .	AL440000.2	CHT1:240300U2-24050U24	I		01114.32112404-32120331	11
LINCO F150 CHT :: 140290089-140519004 4 DMIST 4 CHT :: 10170399151-73730487 . CROCCP2 chr1:16618253-16657232 . AL137782.1 chr13:75549773-75807120 9 AC245100.4 chr1:148402516-148432545 . AC009022.1 chr16:69976297-70065948 1 AC009414.2 chr2:87454781-87636740 . AC068152.1 chr17:46984045-47100323 1 CYTOR chr2:87454781-87636740 3 AC090181.3 chr16:1688355-1690536 . MIR4435-2HG chr2:111038776-111523376 11 AL031009.1 chr16:1688355-1690536 .	ALU23755.1	cnr1:168400829-168495685	4	234121.2 BMC1D1	chr10.72600151 72720497	11
CCVCCC-2 CITIT: 100 102:35-10007202 AL 15/702.1 CITIT: 15/15/94/7/3-7300/120 9 AC245100.4 chr1:148402516-148432545 AC009022.1 chr16:69976297-70065948 1 AC009414.2 chr2:36354749-36355114 AC068152.1 chr17:46984045-47100323 1 CYTOR chr2:87454781-87636740 3 AC090181.3 chr15:77063397-77064910 . MIR4435-2HG chr2:111038776-111523376 11 AL031009.1 chr16:1688355-1690536 .		chr1:146290669-146519604	4	ΔI 127702 1	chr13.75540772 75907407	
AC245 T00.4 CITT: 1464022 10- 1464022 30- 1464022 30- 1464022 30- 1466022 10 AC009022.1 CITT: 1609022 30- 70005948 T AC009414.2 chr2:36354749-36355114 AC068152.1 chr17:46984045-47100323 1 CYTOR chr2:87454781-87636740 3 AC090181.3 chr15:77063397-77064910 . MIR4435-2HG chr2:111036776-111523376 11 AL031009.1 chr16:1688355-1690536 .		oni 1.10010203-10007232		AC 10//02.1	chr16:60076207 70065049	9 1
Accuse (nz.soss) (49-soss) (14 Accuse (12.soss) (49-soss) (14) Citr (14906404) (40-47) (100323) 1 CYTOR chr2:87454781-87636740 3 AC090181.3 chr15:77063397-77064910 . MIR4435-2HG chr2:111036776-111523376 11 AL031009.1 chr16:1688355-1690536	AC243 100.4	chr1:148402316-148432545	•		obr17:46094045 47400202	1
MIR4435-2HG chr2·111036776-111523376 11 AL031009.1 chr16:1688355-1690536	AU009414.2 CVTOP	0112.00004/49-00000114 chr2.87/5/701 976267/0		AC000102.1	chr15,77063307,77064010	ſ
	MIR4435-2HG	chr2.111036776-111523376	11	AL031009.1	chr16:1688355-1690536	

^aSIN: sense intronic ncRNA, ^bSON : sense overlapping ncRNA