lncRNA *HANR* promotes tumorigenesis and increase of chemoresistance in hepatocellular carcinoma

Supplementary Table 1: Primer and quantitative PCR information

Gene name	Primer sequence (5'-3')	Annealing temp.
HANR	CGGATGAACAGCAACCCT GGATGCCGTCAAACACCT	58°C
Bax1	CCCGAGAGGTCTTTTTCCGAG CCAGCCCATGATGGTTCTGAT	58°C
Bcl-2	GGTGGGGTCATGTGTGTGG CGGTTCAGGTACTCAGTCATCC	58°C
GSK3β	GGCAGCATGAAAGTTAGCAGA GGCGACCAGTTCTCCTGAATC	58°C
GAPDH	CTGGGCTACACTGAGCACC AAGTGGTCGTTGAGGGCAATG	56°C

Supplementary Table 2: Sequence information of *HANR* and control siRNAs

siRNA name	Sequence (5’-3’)
HANR siRNA	Sense: GUUCAUGAGGCUAUGGAAAUU
	Antisense: UUUCCAUAGCCUCAUGAACUU
Control siRNA	Sense: UUCUCCGAACGUGUCACGUTT
	Antisense: ACGUGACACGUUCGGAGAATT

Supplementary Table 3: List of identified lncRNAs (Peri-tumor vs. cancer >3) from microarray analysis

UP regulated lncRNAs													
ID	HCC	Peri-tumor	log2Ratio	Ratio	Transcription ID	Accession number	Gene Name	DEFINITION	Chrom	start	end	strand	Database Source
RB_p_00021830 7	13.85662	7.6147098 44	6.2419 1	75.683 67	ENST00000 423489	ENSG00000 237567	RP3-359N14.2	lincRNA	chr6	1.06E+08	1.06E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021830 7	13.85662	7.6147098 44	6.2419 1	75.683 67	TCONS_00011530	XLOC_00057 96	linc-PREP-1	long non-coding RNA,intergenic	chr6	1.06E+08	1.06E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00020414 7	14.33029	8.8811139 61	5.4491 73	43.688 23	ENST00000 414790	ENSG00000 130600	H19	lincRNA	chr11	20164 05	20191 05	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021901 5	14.18259	8.8902642 77	5.2923 24	39.187 57	ENST00000 412788	ENSG00000 130600	H19	lincRNA	chr11	20164 05	20190 44	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022647 2	12.5753	7.7380922 6	4.8372 11	28.585 48	ENST00000 431095	ENSG00000 130600	H19	lincRNA	chr11	20164 66	20190 45	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022954 5	14.37099	9.5468944 6	4.8240 99	28.326 87	ENST00000 535745	ENSG00000 130600	H19	lincRNA	chr11	20164 07	20190 72	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000	14.244	9.4460494	4.7988	27.835	HIT00003384	HIX00009348.	Note=/	Alias=No	chr11	2016	2016	-	non-coding Gene from

221191	88	07	35	13	40.9	19	BC106079	n-protein coding transcript.		407	744		H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000238041	14.38832	9.61470984	4.77361	27.35268	ENST00000436715	ENSG00000130600	H19	lincRNA	chr11	2016668	2017801	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000219662	14.22747	9.519636253	4.707829	26.13351	ENST00000446406	ENSG00000130600	H19	lincRNA	chr11	2016445	2019057	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000205976	14.2537	9.5641494 9	4.68955	25.80449	ENST00000417089	ENSG00000130600	H19	lincRNA	chr11	2016463	2018255	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000234984	11.32994	6.7747870 6	4.55155 49	23.50913	ENST00000422826	ENSG00000130600	H19	lincRNA	chr11	2016439	2019027	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000215860	12.69098	8.231221181	4.459759	22.00499	ENST00000442037	ENSG00000130600	H19	lincRNA	chr11	2016405	2017421	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000207481	10.76963	6.330916878	4.438714	21.68634	ENST00000451772	ENSG00000088970	PLK1S1	lincRNA	chr20	21199096	21224992	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000230923	10.64791	6.219168 52	4.4287 4	21.53691	ENST00000554142	ENSG00000258532	RP11-353P15.1	lincRNA	chr14	84373215	84381394	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000	11.124	6.8826430	4.2419	18.921	HIT00000874	HIX0009348.	Note=	Alias=No	chr11	2016	2016	-	non-coding Gene from

206901	61	49	63	61	55.14	19	H19/BC010185	n-protein coding transcript.		407	803		H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000212835	12.6534	8.4676055	4.1857 99	18.19915	TCONS_00022412 TCONS_00022763 TCONS_00022764 TCONS_00022765 TCONS_00023117 TCONS_00023118 TCONS_00023119	XLOC_011047	linc-TMEM30B-1	long non-coding RNA,intergenic	chr14	62022961	62044967	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000204956	13.54092	9.4978518 37	4.0430 63	16.48479	ENST00000411861	ENSG00000130600	H19	linc RNA	chr11	2016405	2018447	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000228701	13.67656	9.7176764 23	3.9588 87	15.55048	ENST00000411754	ENSG00000130600	H19	linc RNA	chr11	2016466	2019027	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000233450	8.665336	5.0660891 9	3.5992 47	12.1194	NR_033373	GI:291045126	KIF9-AS1	DEFINITION Homo sapiens KIF9 antisense RNA 1 (KIF9-AS1), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)

RB_p_0002117 49	10.830 12	7.243 173983	3.5 869 45	12. 016 5	ENST 00000 569574	ENSG 00000 260439	LA16c-366D3.1	antis ense	chr 16	97 10 72	98 44 95	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002160 56	13. 652 84	10.13 0570 56	3.5 222 74	11. 489 74	ENST 00000 428066	ENSG 00000 130600	H19	linc RNA	chr 11	20 16 91 2	20 22 70 0	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002027 13	10. 598 98	7.108 524457	3.4 904 59	11. 239 13	ENST 00000 433219	ENSG 00000 235319	AC 012 360 .4	linc RNA	chr 2	1. 06 E+ 08	1. 06 E+ 08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002261 21	8.9 023 75	5.491 853096	3.4 105 22	10. 633 33	ENST 00000 513235	ENSG 00000 250240	CTD-2154I11.2	antis ense	chr 5	95 05 26 85	95 06 79 91	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002112 61	10. 785 04	7.383 704292	3.4 013 39	10. 565 87	XR_17 1924	GI:410 172689	LOC10 012 824 2	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100128242					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002276 57	13. 734 02	10.34 429591	3.3 897 26	10. 481 15	ENST 00000 447298	ENSG 00000 130600	H19	linc RNA	chr 11	20 16 91 7	20 17 69 7	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002260 56	10. 112 44	6.734 70962	3.3 777 3	10. 394 37	ENST 00000 561000	ENSG 00000 259687	RP11-293M10.5	linc RNA	chr 14	75 76 11 06	75 76 28 43	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002375 06	10. 710 81	7.413 627929	3.2 971 79	9.8 299 12	XR_13 3492	GI:341 914781	SDR16C6P	DEFINITION PREDICTED: Homo sapiens short chain dehydrogenase/reductase family					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002368 89	12. 980 76	9.743 151394	3.2 376 13	9.4 323 22	ENST 00000 439725	ENSG 00000 130600	H19	linc RNA	chr 11	20 16 40 5	20 18 69 0	-	non-coding Gene from Gencode(http://www.gencodegenes.o

													rg/)
RB_p_0002217 51	13.166 63	10.078817 95	3.087816	8.5020 8	NR_002196	GI:57862814	H19	DEFINITION Homo sapiens H19, imprinted maternally expressed transcript					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002217 51	13.166 63	10.078817 95	3.087816	8.5020 8			lncRNAdb: H19_NR_002196.1 (Human)						non-coding Gene from lncRNAdb(www.lncrnadb.com)
RB_p_0002349 30	10.869 59	7.8548683 83	3.0147 25	8.0820 73	TCONS_00025212 TCONS_00025572	XLOC_012397	linc-PMP22-1	long non-coding RNA,intergenic	chr 17	15179193	15182832	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002010 31	10.392 32	7.4797802 64	2.9125 37	7.5294 12	ENST00000454228	ENSG00000228275	ARMCX3-AS1	antisense	chr X	1.01E+08	1.01E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002328 68	10.1718	7.2854022 19	2.8864	7.3942 31	ENST00000564984	ENSG00000260121	RP5-1142A6.9	antisense	chr 16	88785022	88786867	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002282 51	9.3901 69	6.5235619 56	2.8666 07	7.2934 78	ENST00000526385	ENSG00000255502	RP11-379J13.2	processed_transcript	chr 11	97749780	97813762	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002375 08	9.7780 77	6.9541963 1	2.8238 81	7.0806 45	ENST00000511785	ENSG00000245685	AF146191.4	lincRNA	chr 4	1.91E+08	1.91E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002378 97	9.0168 08	6.2761244 05	2.7406 84	6.6838 71	ENST00000435441	ENSG00000237856	AC062020.2	lincRNA	chr 2	1.24E+08	1.24E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p	9.0	6.276	2.7	6.6		XLOC	linc-	long	chr	1.	1.	+	non-coding Gene

_000237897	16808	124405	40684	83871	TCONS_00002998	_001654	CNTNAP5-2	non-coding RNA,intergenic	2	24E+08	24E+08		from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000222418	9.921841	7.22400167	2.697839	6.488294	NR_034134	GI:30079672	LOC727982	DEFINITION Homo sapiens uncharacterized LOC727982 (LOC727982), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000207590	8.952741	6.257387843	2.695353	6.477124	TCONS_00000887	XLOC_000138	linc-EIF2C4-2	long non-coding RNA,intergenic	chr1	36133844	36134778	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000210970	8.552669	5.9541963 1	2.598473	6.056452	TCONS_00022632	XLOC_010933	linc-DIO3-7	long non-coding RNA,intergenic	chr14	1.01E+08	1.01E+08	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000201592	11.55075	9.023754353	2.526992	5.763689	TCONS_00022315	XLOC_010725	linc-ANKRD10-4	long non-coding RNA,intergenic	chr13	1.12E+08	1.12E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000210980	9.698705	7.1799090 9	2.518796	5.731034	ENST00000517773	ENSG00000254286	RP11-89K10.1	antisense	chr8	1.28E+08	1.28E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000 2060	10.10001	7.599 912842	2.500092	5.657216	ENST00000 43829	ENSG00000 22418	AC096559	linc RNA	chr2	120060	124500	+	non-coding Gene from Gencode(http://ww

38					2	4	.1			10	85		w.gencodegenes.org/)
RB_p_000227741	11.44863	8.95274124	2.495891	5.640767	TCONS_00027229	XLOC_013267	linc-ZNF676-2	long non-coding RNA,intergenic	chr19	22513111	22514194	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000226205	13.65329	11.163335 19	2.489958	5.617615	HIT00001012 84.12	HIX0019487.18	Note=RPS5/D28455	Alias=Non-protein coding transcript.	chr19	58898636	58898710	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000231873	10.92426	8.4676055 5	2.45665	5.489407	ENST00000509671	ENSG00000248491	RP11-125O18.1	lincRNA	chr4	1.28E+08	1.28E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000225136	9.773139	7.344295908	2.428843	5.384615	ENST00000457668	ENSG00000228590	AC007381.3	lincRNA	chr2	60577729	60580151	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000225136	9.773139	7.344295908	2.428843	5.384615	TCONS_00003294	XLOC_002106	linc-FANCL-4	long non-coding RNA,intergenic	chr2	60577729	60580151	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000206599	11.07347	8.6777196 42	2.395753	5.262515	ENST00000505541	ENSG00000215068	AC025171.1	lincRNA	chr5	43041858	43044988	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000	9.6591	7.2992080	2.3598	5.1333	ENST00000	ENSG00000	CTD-2	lincRNA	chr17	7899	7899	-	non-coding Gene from

230759	04	18	96	33	575647	262873	561B21.11			1768	2292		Gencode(http://www.gencodegenes.org/)
RB_p_000233693	7.804131	5.4757334331	2.328398	5.022472	ENST00000523759	ENSG00000241489	AF011889.5	processed_transcript	chrX	1.49E+08	1.49E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000209783	8.236014	5.9307373738	2.305277	4.942623	ENST00000590292	ENSG00000267751	AC009005.2	antisense	chr19	567310	571734	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000204633	9.27496	7.01122727255	2.263733	4.802326	HIT00032714712	HIX0019908.20	Note=/Z36839	Alias=Non-protein coding transcript.	chr5	1.28E+08	1.28E+08	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000201693	10.93958	8.7193888821	2.22019	4.659549	NR_024246	GI:37506587 2	LOC144742	DEFINITION Homo sapiens uncharacterized LOC144742 (LOC144742), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000217670	12.72526	10.507794 64	2.217465	4.650755	HIT00010119 8.13	HIX0010278.18	Note=RPS25/D28369	Alias=Non-protein coding transcript.	chr11	1.19E+08	1.19E+08	-	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000236474	7.581201	5.4093909 36	2.17181	4.505882	ENST00000535720	ENSG00000256364	RP11-173P15.3	antisense	chr12	1.21E+08	1.21E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002396	12.4066	10.267371 93	2.139232	4.405274	HIT00010120 1_06.	HIX0003190.19	Note=/D28	Alias=Non-pr	chr3	394482	394491	+	non-coding Gene from H-InvDB(http://h-in

69					4		372	otein codi ng tran script.		12	50		vitational.jp/hinv/ahg-db/index.jsp)
RB_p_000231199	15.70051	13.5626001 9	2.137907	4.401232	HIT00006545 9.12	HIX00015809.17	Note=SLC32A1/AF064848	Alias=Non-protein codi ng tran script.	chr 20	37352868	37353207	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000219929	7.882643	5.7681843 25	2.114459	4.330275	NR_039871	GI:33775678 9	MIR4720	DEFINITION Homo sapiens microRNA 4720 (MIR4720), microRNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000204378	8.434628	6.3309168 78	2.103711	4.298137	ENST00000056268 5	ENSG00000260511	RP11-556H2.2	sense_intronic	chr 16	79139853	79144779	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000238655	9.259743	7.1699250 01	2.089818	4.256944	TCONS_00019356 TCONS_00019939	XLOC_009183	linc-LRP5-3	long non-codi ng RNA ,inte rgen ic	chr 11	67889046	67897983	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000234783	7.599913	5.5545888 52	2.045324	4.12766	ENST00000502823	ENSG00000248714	RP11-1079K10.3	linc RNA	chr 17	47438526	47443477	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000220520	8.236014	6.1996723 45	2.036342	4.102041	ENST00000565968	ENSG00000261120	RP11-62H20.1	antis ense	chr 14	60386140	60387057	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p	10.	8.005	2.0	4.0	HIT00	HIX00	Not	Alias	chr	1.	1.	+	non-coding Gene

_000234501	01332	624549	07698	21401	0058767.12	24780.14	e=/AB023487	=Non-protein coding transcript.	5	75E+08	75E+08		from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00020190707	8.42836	6.4262647555	2.002095	4.005814	TCONS_00003590	XLOC_001374	linc-RHOB-7	long non-coding RNA,intergenic	chr2	18825463	19125152	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022394343	14.14123	12.150540564	1.990688	3.974266	HIT00001012047.13	HIX00011057.18	Note=RPLP0/D28418	Alias=Non-protein coding transcript.	chr12	1.21E+08	1.21E+08	-	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00021935050	13.97728	12.024966648	1.952313	3.869946	HIT00001012004_04.4	HIX00006010.19	Note=/D28375	Alias=Non-protein coding transcript.	chr6	74229744	74230755	-	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00021660909	8.616549	6.6794801	1.937069	3.829268	ENST000005124388	ENSG000002477008	RP11-323F5.2	lincRNA	chr4	45439255	45929022	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021606055	8.584963	6.6794801	1.905482	3.746341	ENST000005026800	ENSG000002493332	RP1-251I12.1	lincRNA	chr5	15112485	15117116	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)

RB_p_00021605	8.584963	6.6794801	1.905482	3.746341	TCONS_00009608	XLOC_004739	linc-ANKH-3	long non-coding RNA,intergenic	chr5	151124851	151171716	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00023607	9.064743	7.1699250 01	1.894818	3.718745	NR_047036	GI:390190218	LINC00457	DEFINITION Homo sapiens long intergenic non-protein coding RNA 457					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00021823	7.774787	5.8826430 49	1.892144	3.711864	ENST00000572077	ENSG00000262223	RP11-1055B8.3	lincRNA	chr17	7934980 0	7935916 0	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021475	10.89747	9.0098286 17	1.887639	3.700291	ENST00000567090	ENSG00000260345	AC009052.12	processed_transcript	chr16	5749496 6	5749666 49	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022980 7	9.662668	7.7911628 89	1.871505	3.659142	ENST00000505107	ENSG00000251450	CTC-459I6.1	antisense	chr5	8024697 47	8024879 9	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022492 4	10.11699	8.2479275 13	1.869066	3.652961	NR_003125	GI:25530889 4	SNORD14E	DEFINITION Homo sapiens small nucleolar RNA, C/D box 14E (SNORD14E), small					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00023113 5	8.442943	6.5924570 37	1.850486	3.606218	ENST00000428732	ENSG00000234264	RP4-694A7.4	lincRNA	chr1	6896235 8	6900431 0	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022926 2	8.599913	6.7615512 32	1.838362	3.576037	ENST00000414475	ENSG00000223930	RP11-33A14.1	lincRNA	chr3	1.78E+08	1.78E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p	8.3	6.475	1.8	3.5	ENST	ENSG	RP	linc	chr	89	89	-	non-coding Gene

_000 2299 18	037 81	7334 31	280 47	505 62	00000 50609 0	00000 24948 7	11-97 O1 2.2	RNA	15	12 88 01	14 78 34		from Gencode(http://www.gencodegenes.org/)
RB_p _000 2205 96	11. 832 49	10.00 9828 62	1.8 226 66	3.5 373 42	ENST 00000 42786 8	ENSG 00000 23267 7	LIN C00 665	linc RNA	chr 19	36 80 64 77	36 81 31 30	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p _000 2361 48	12. 739 94	10.92 6295 99	1.8 136 43	3.5 152 88	HIT00 00897 72_02. 10	HIX01 15844. 7	Note=/ BC 018 860	Alias =Non-protein codi ng tran script.	chr M	73 80	75 15	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p _000 2209 19	11. 577 43	9.768 1843 25	1.8 092 45	3.5 045 87	HIT00 01012 41.9	HIX00 33356. 10	Note=/ D28 412	Alias =Non-protein codi ng tran script.	chr 6	1. 18 E+ 08	1. 18 E+ 08	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p _000 2275 39	8.4 553 27	6.651 0516 91	1.8 042 76	3.4 925 37	ENST 00000 43769 6	ENSG 00000 23040 0	RP 11-359 G2 2.2	linc RNA	chr 20	22 66 42 99	22 66 59 82	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p _000 2211 44	9.6 238 81	7.823 3672 4	1.8 005 14	3.4 834 44	TCON S_000 11703	XLOC _0051 82	linc-JA RID 2-2	long non-codi ng RNA ,inte rgen ic	chr 6	14 51 30 57	14 51 46 97	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p _000 2367 93	9.5 905 87	7.797 6615 26	1.7 929 26	3.4 651 69	TCON S_000 22406	XLOC _0109 67	linc-OR 5A U1-	long non-codi ng	chr 14	21 66 86 20	21 67 50 59	-	non-coding Gene from JohnRinn lincRNA catalogue(http://w

							1	RNA,intergenic					ww.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002322 10	10.65866	8.878050913	1.780607	3.435707	TCONS_00024872 TCONS_00024873	XLOC_011765	linc-CDH3-4	long non-coding RNA,intergenic	chr16	68601106	68610173	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002144 59	11.04849	9.272629785	1.775857	3.424414	ENST00000436501	ENSG00000240355	AC004869.3	linc RNA	chr7	46516054	46517538	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002230 90	14.4124	12.639284 18	1.77312	3.417924	NR_028352	GI:25635501 6	PIGP	DEFINITION Homo sapiens phosphatidylinositol glycan anchor biosynthesis, class					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002187 35	10.28425	8.511752654	1.772493	3.416438	ENST00000483588	ENSG00000175061	C17orf76-AS1	processed_transcript	chr17	16342639	16367300	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002046 83	8.364135	6.592457037	1.771678	3.414508	TCONS_00022751	XLOC_011031	linc-WDHD1-2	long non-coding RNA,intergenic	chr14	55553591	55561333	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002235 90	9.27263	7.511752654	1.760877	3.389041	ENST00000502433	ENSG00000250802	ZBED3-AS1	processed_transcript	chr5	76382625	76435128	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002001 07	11.19737	9.441906705	1.755464	3.376348	NR_037618	GI:313482870	EEF1E1-MUT	DEFINITION Homo sapiens EEF1E1-MUTED readthrough (EEF1E1-MUTED),					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/R

							ED	non-coding					efSeq/)
RB_p_0002207 67	8.5 117 53	6.761 5512 32	1.7 502 01	3.3 640 55	ENST 00000 59624 1	ENSG 00000 23187 6	AC 009 158 .1	linc RNA	chr 16	26 33 38 32	26 33 43 82	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002009 27	11. 231 52	9.482 8079 57	1.7 487 13	3.3 605 87	ENST 00000 45278 5	ENSG 00000 22785 7	RP 4-5 33D 7.5	antis ense	chr 1	46 59 90 42	46 60 47 53	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002130 21	8.2 573 88	6.523 5619 56	1.7 338 26	3.3 260 87	ENST 00000 45347 6	ENSG 00000 22392 9	AC 007 381 .2	linc RNA	chr 2	60 58 63 50	60 61 85 10	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002270 45	11. 593 97	9.868 8225 55	1.7 251 52	3.3 061 5	ENST 00000 55002 9	ENSG 00000 25768 1	RP 11- 341 G2 3.4	antis ense	chr 12	1. 04 E+ 08	1. 04 E+ 08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002306 45	10. 899 36	9.183 6353 81	1.7 157 22	3.2 846 09	ENST 00000 42800 8	ENSG 00000 17741 0	ZN FX1 -AS 1	antis ense	chr 20	47 89 51 78	47 90 57 97	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002197 01	7.8 948 18	6.179 9090 9	1.7 149 09	3.2 827 59	TCON S_000 26551	XLOC _0128 76	linc- RT TN- 4	long non- codi ng RNA ,inte rgen ic	chr 18	69 44 92 69	69 45 42 42	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002383 47	8.3 923 17	6.679 4801	1.7 128 37	3.2 780 49	ENST 00000 43768 1	ENSG 00000 24212 5	SN HG 3	proc esse d_tr ansc ript	chr 1	28 83 28 62	28 83 61 45	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002128 10	8.9 336 91	7.224 0016 74	1.7 096 89	3.2 709 03	ENST 00000 51040 7	ENSG 00000 24986 4	RP 11- 39K 24. 10	proc esse d_tr ansc ript	chr 9	51 31 97 8	51 64 25 1	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)

RB_p_00020093 2	8.055282	6.35755205	1.69773	3.243902	ENST00000507483	ENSG00000251584	RP11-440I14.3	lincRNA	chr4	1.75E+08	1.75E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021999 18	11.26004	9.5670053 7	1.69303 2	3.233355	NR_026825	GI:39258387 8	RPSAP52	DEFINITION Homo sapiens ribosomal protein SA pseudogene 52 (RPSAP52),					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00023115 3	10.27671	8.584962501	1.69174 4	3.230469	NR_027179	GI:22454897 8	C17orf76-AS1	DEFINITION Homo sapiens C17orf76 antisense RNA 1 (C17orf76-AS1), transcript					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00022355 6	9.672425	7.982993575	1.68943 2	3.225296	ENST00000585329	ENSG00000267166	RP11-527L4.5	antisense	chr17	41991800	42000369	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020060 7	8.941048	7.252665432	1.68838 2	3.222951	ENST00000508201	ENSG00000215231	CTD-2247C11.3	lincRNA	chr5	50347 1	50701 17	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022903 4	7.326429	5.643856 19	1.68257 3	3.21	ENST00000583490	ENSG00000266010	RP11-627G18.3	lincRNA	chr18	19746858	19748929	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020371 7	9.127994	7.447083226	1.68091 1	3.206304	TCONS_00005711	XLOC_002993	linc-MUC20-5	long non-coding RNA,intergenic	chr3	1.95E+08	1.95E+08	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00020672 4	9.166791	7.503825738	1.66296 5	3.166667	ENST00000457006	ENSG00000230724	RP11-304M2.2	lincRNA	chr11	12895 9	13129 7	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p	12.	11.24	1.6	3.1	NR_00	GI:848	RN	DEFINITION Homo					non-coding Gene

_000202927	902	421516	57783	55313	2715	71994	7SL1	sapiens RNA, 7SL, cytoplasmic 1 (RN7SL1), small cytoplasmic					from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000202927	12.902	11.244215 16	1.657783	3.155313			lncRNAdb: 7SL_NR_002715.1 (Human)						non-coding Gene from lncRNAdb(www.lncrnadb.com)
RB_p_000220140	9.154818	7.5038257 38	1.650992	3.140496	ENST00000556168	ENSG00000258807	RP11-1152H15.1	linc RNA	chr14	88192298	88200642	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000225090	9.706064	8.0606959 32	1.645368	3.128277	ENST00000563036	ENSG00000260671	RP11-278A23.2	sense_intronic	chr16	87773368	87781312	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000215154	8.134426	6.4918530 96	1.642573	3.122222	ENST00000538266	ENSG00000255717	SNHG1	processed_transcript	chr11	62620080	62622939	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000204801	8.787903	7.1497471 2	1.638155	3.112676	TCONS_00011763	XLOC_005224	linc-LOC10012963 6-3	long non-coding RNA ,intergenic	chr6	28580904	28597774	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000210782	10.11244	8.4797802 64	1.632659	3.10084	NR_045025	GI:34396262 6	C17orf76-AS1	DEFINITION Homo sapiens C17orf76 antisense RNA 1 (C17orf76-AS1), transcript					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000212409	7.243174	5.6147098 44	1.628464	3.091837	ENST00000546592	ENSG00000257760	RP11-478C19.5	processed_transcript	chr12	1.11E+08	1.11E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002100	8.415742	6.7879025 59	1.627839	3.090498	TCONS_000	XLOC_009110	linc-API5-5	long non-codi	chr11	3869 90	3870 01	+	non-coding Gene from JohnRinn lincRNA

06					19277			ng RNA ,inte rgen ic		08	26		catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021483 1	14.82541	13.2094533 7	1.615953	3.065139	NR_003932	GI:219881533	RPL13AP20 (HANR)	DEFINITION long non-coding RNA, intergenic					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00023264 9	15.03881	13.4265268 5	1.612285	3.057357	NR_033958	GI:30006900 4	LOC283440	DEFINITION Homo sapiens uncharacterized LOC283440 (LOC283440), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00022493 5	8.262095	6.6510516 91	1.611043	3.054726	TCONS_00011571 TCONS_00012793	XLOC_005849	linc-OLIG3-1	long non-coding RNA ,intergenic	chr6	1.38E+08	1.38E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021993 5	8.84549	7.2431739 83	1.602316	3.036304	NR_024100	GI:19720985 9	LINC00323	DEFINITION Homo sapiens long intergenic non-protein coding RNA 323					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00023226 2	13.11293	11.515083 8	1.597844	3.026907	ENST00000544386	ENSG00000236829	Z97634.5	processed_transcript	chr16	4366 62	4373 23	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
DOWN regulated lncRNAs													
ID	HCC	Peri-tumor	log2Ratio	Ratio	transcription ID	accession number	geneName	DEFINITION	chromosome	start	end	strand	database source
RB_p_00021825 0	5.554589	10.0126245 4	-4.45804	21.97872	TCONS_00000111	XLOC_001148	linc-ATP6V1G3-	long non-coding RNA	chr1	1.99E+08	1.99E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.

							2	,intergenic					org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022533	10.63345	14.2918901 4	-3.6584	12.62701	NR_003285	GI:14237259 6	RNA5-8S5	DEFINITION Homo sapiens RNA, 5.8S ribosomal 5 (RNA5-8S5), ribosomal RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00022871 0	6.67948	10.2094537	-3.5299 7	11.55122	HIT00007919 99_03.4	HIX01161622.4	Note=/AF408744	Alias=Non-protein coding transcript.	chr2	89901505	89901789	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00022534 8	10.43983	13.9660547 6	-3.5262 2	11.52124	HIT00034083 5_03.4	HIX01764534	Note=/CR749662	Alias=Non-protein coding transcript.	chrUn_220	155996	156161	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00021035	5.129283	8.6110247 97	-3.4817 4	11.17143	ENST00000456126	ENSG00000236866	AL157902.3	antisense	chr1	1.18E+08	1.18E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021179 7	7.573647	11.0337671 1	-3.4601 2	11.00525	NR_027450	GI:22624661 4	FAM186B	DEFINITION Homo sapiens family with sequence similarity 186, member B					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00022756 0	6.022368	9.4067364 83	-3.3843 7	10.44231	TCONS_00016073	XLOC_007462	linc-FGD3-2	long non-coding RNA,intergenic	chr9	95432686	95435900	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)

RB_p_00022663	6.199672	9.49884892	-3.2991	9.843537	TCONS_00007452 TCONS_00007454 TCONS_00007925 TCONS_00007926 TCONS_00008695 TCONS_00009193 TCONS_00009194 TCONS_00009196 TCONS_00009197 TCONS_00009198	XLOC_004209	linc-ACSL1-2	long non-coding RNA,intergenic	chr4	1.86E+08	1.86E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021771 4	7.764872	11.00316651	-3.2382	9.436782	ENST00000524555	ENSG00000255071	SAA2-SAA4	processed_transcript	chr11	18252969	18270182	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00023567 6	8.41996	11.63934071	-3.2193	9.313869	ENST00000584566	ENSG00000263611	RP11-612A1.1	lincRNA	chr18	24977915	24981868	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021 36	8.856426	12.07347215	-3.2170 5	9.29881 3	NR_036441	GI:30189656 3	VRK2	DEFINITION Homo sapiens vaccinia related kinase 2 (VRK2), transcript					non-coding Gene from NCBI Refseq NR/XR(http://www.

53								variant					ncbi.nlm.nih.gov/RefSeq/)
RB_p_00023765	8.933691	12.01349715	-3.07981	8.45501	XR_133419	GI:341914634	LOC100653086	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100653086					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00023482 1	9.001408	11.98637538	-2.9849 7	7.917073	HIT00001012 07.12	HIX00006227.18	Note=/D28378	Alias=Non-protein coding transcript.	chr 6	1.33E+08	1.33E+08	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00020762 2	8.839204	11.81157539	-2.97237	7.848253	NR_023344	GI:187960111	RNU6ATAC	DEFINITION Homo sapiens RNA, U6atac small nuclear (U12-dependent splicing)					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00023163 4	10.34152	13.19698626	-2.85547	7.23738	NR_046298	GI:37471734 5	SLC25A1	DEFINITION Homo sapiens solute carrier family 25 (mitochondrial carrier;					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00023872 1	10.39714	13.24220651	-2.84507	7.185391	NR_028413	GI:257470993	APOC1P1	DEFINITION Homo sapiens apolipoprotein C-I pseudogene 1 (APOC1P1), transcript					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00019999 3	7.751544	10.55937709	-2.80783	7.00232	ENST00000430128	ENSG00000228016	RAPGEF4-AS1	linc RNA	chr 2	1.74E+08	1.74E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020351 7	10.44139	13.21909287	-2.7777	6.857605	NR_028414	GI:257470994	APOC1P1	DEFINITION Homo sapiens apolipoprotein C-I pseudogene 1 (APOC1P1), transcript					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00023032	10.44139	13.21644274	-2.77505	6.84502	NR_028412	GI:257470990	APOC1P1	DEFINITION Homo sapiens apolipoprotein C-I pseudogene 1 (APOC1P1),					non-coding Gene from NCBI Refseq NR/XR(http://www.

05								transcript					ncbi.nlm.nih.gov/RefSeq/)
RB_p_00021923	5.554589	8.31741261	-2.76282	6.787234	ENST00000417931	ENSG00000227244	RP11-322C8.2	lincRNA	chr10	62776032	62786178	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021919	6.523562	9.2749604 72	-2.7514	6.733696	TCONS_00004240	XLOC_002080	linc-SRBD1-1	long non-coding RNA,intergenic	chr2	45875881	45877964	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00019974	7.353147	10.090112 42	-2.73697	6.666667	ENST00000571062	ENSG00000262231	RP11-960B9.2	processed_transcript	chr17	60926800	60931833	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021214 9	6.651052	9.348728154	-2.69768	6.487562	TCONS_00018147	XLOC_008426	linc-LYZL1-4	long non-coding RNA,intergenic	chr10	29217507	29264218	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022043 4	6.149747	8.845490051	-2.69574	6.478873	ENST00000430125	ENSG00000227659	CLYBL-AS2	antisense	chr13	1E+08	1E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022513 4	8.623881	11.30435132	-2.68047	6.410646	XR_171621	GI:410172130	LOC100996298	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100996298					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00021844 2	6.022368	8.700439718	-2.67807	6.4	ENST00000533109	ENSG00000255090	RP11-820L6.1	processed_transcript	chr11	1.22E+08	1.22E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p	7.2	9.915	-2.6	6.3	ENST	ENSG	RP	linc	chr	27	27	-	non-coding Gene

_000229730	43174	879379	7271	76238	000004360119	000002420201	11-268G12.3	RNA	X	1770221	1944115		from Gencode(http://www.gencodegenes.org/)
RB_p_000211107	9.252665	11.923513 2	-2.67085	6.368033	HIT00002164 70.13	HIX00008469.16	Note=/S73202	Alias=Non-protein coding transcript.	chr9	1.33E+08	1.33E+08	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000212854	10.30064	12.910174 25	-2.60954	6.103072	NR_026645	GI:22113682 3	DET1	DEFINITION Homo sapiens de-etiolated homolog 1 (Arabidopsis) (DET1),					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000220633	7.326429	9.922584403	-2.59615	6.046729	TCONS_00025374 TCONS_00025375 TCONS_00025376 TCONS_00025377 TCONS_00025378	XLOC_012192	linc-PPP1R1B-1	long non-coding RNA,intergenic	chr17	37706689	37723895	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000231227	8.442943	11.024447 12	-2.5815	5.985632	XR_159474	GI:41017015 4	LOC100996298	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100996298					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000209831	5.906891	8.471675214	-2.5647 8	5.916667	ENST00000572471	ENSG00000262721	AC106782.20	sense_overlapping	chr16	30887086	30906537	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)

RB_p_0002191 82	6.2 573 88	8.797 6615 26	-2.5 402 7	5.8 169 93	TCON S_000 14536	XLOC _0072 18	linc-FA M8 4B-10	long non-codi ng RNA ,inte rgen ic	chr 8	1. 29 E+ 08	1. 29 E+ 08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://w ww.broadinstitute. org/genome_bio/h uman_lincrnas/?q= lincRNA_catalog)
RB_p_0002138 46	6.4 918 53	8.994 3534 37	-2.5 025	5.6 666 67	ENST 0000 0545 75 0	ENSG 0000 0255 86 6	RP 11-221 N13 .2	linc RNA	chr 12	65 95 33 70	65 95 46 69	+	non-coding Gene from Gencode(http://ww w.gencodegenes.o rg/)
RB_p_0002035 90	6.6 220 52	9.083 4793 27	-2.4 614 3	5.5 076 14	XR_17 1497	GI:410 171952	LIF R-A S1	DEFINITION PREDICTED: Homo sapiens LIFR antisense RNA 1 (LIFR-AS1), misc_RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www. ncbi.nlm.nih.gov/R efSeq/)
RB_p_0002190 46	6.7 073 59	9.152 2848 42	-2.4 449 3	5.4 449 76	NR_04 8547	GI:386 869525	MG ST1	DEFINITION Homo sapiens microsomal glutathione S-transferase 1 (MGST1),					non-coding Gene from NCBI Refseq NR/XR(http://www. ncbi.nlm.nih.gov/R efSeq/)
RB_p_0002029 39	5.9 541 96	8.392 3174 23	-2.4 381 2	5.4 193 55	ENST 0000 0330 46 9	ENSG 0000 0233 51 3	RP 11-132 M7. 1	proc esse d_tr ansc ript	chr 6	85 39 70 68	85 39 84 65	-	non-coding Gene from Gencode(http://ww w.gencodegenes.o rg/)
RB_p_0002190 96	6.6 073 3	9.043 0272 84	-2.4 357	5.4 102 56	TCON S_000 17681 TCON S_000 17888 TCON S_000 18856 TCON S_000 18858	XLOC _0086 61	linc-C10 orf1 37-1	long non-codi ng RNA ,inte rgen ic	chr 10	1. 27 E+ 08	1. 27 E+ 08	+	non-coding Gene from JohnRinn lincRNA catalogue(http://w ww.broadinstitute. org/genome_bio/h uman_lincrnas/?q= lincRNA_catalog)
RB_p_0002202	8.6 777 2	11.10 5253 78	-2.4 275 3	5.3 797 31	NR_00 3266	GI:195 539381	LO C22 072	DEFINITION Homo sapiens succinate dehydrogenase complex,					non-coding Gene from NCBI Refseq NR/XR(http://www.

83							9	subunit A,					ncbi.nlm.nih.gov/RefSeq/)
RB_p_00020072 1	6.357552	8.74483383 7	-2.38728	5.231707	ENST00000432995	ENSG00000227528	DIAPH3-AS1	antisense	chr13	60587439	60618491	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020869 8	6.3398 5	8.714245518	-2.3744	5.185185	TCONS_00017253 TCONS_00017468	XLOC_008079	linc-SPANXB1-2	long non-coding RNA,intergenic	chrX	1.4E+08	1.4E+08	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00023532 2	7.573647	9.945443836	-2.3718	5.175853	NR_027794	GI:23993747 3	C3orf17	DEFINITION Homo sapiens chromosome 3 open reading frame 17 (C3orf17),					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00021473 1	8.092757	10.44863257	-2.35588	5.119048	ENST00000418539	ENSG00000236824	BCYRN1	lincRNA	chr2	47558198	47571656	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020867 8	7.375039	9.722807531	-2.3477 7	5.090361	TCONS_00008681	XLOC_004197	linc-CLDN24-3	long non-coding RNA,intergenic	chr4	1.84E+08	1.84E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022974 2	6.787903	9.109830654	-2.32193	5	ENST00000463703	ENSG00000242428	RP11-147N17.1	antisense	chr3	58810196	58956386	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022133 2	10.62981	12.95155793	-2.32175	4.999369	TCONS_00006706	XLOC_003320	linc-BCHE-4	long non-coding RNA,inte	chr3	1.67E+08	1.67E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/h

								rgenic					uman_lincrnas/?q=lincRNA_catalog)
RB_p_00023446	7.503826	9.80413102	-2.3003	4.92562	ENST00000587520	ENSG00000267574	CTC-525D6.5	lincRNA	chr19	29938944	29939287	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021294	7.70044	9.9865531	-2.2861	4.877404	ENST00000442984	ENSG00000225979	AC010746.3	antisense	chr2	1.98E+08	1.98E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020517	5.523562	7.7714894	-2.2479	4.75	NR_002562	GI:74315928	SNORD28	DEFINITION Homo sapiens small nucleolar RNA, C/D box 28 (SNORD28), small					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00022382	8.238405	10.464035	-2.2563	4.677152	ENST00000509506	ENSG00000249100	CTD-2218K11.2	lincRNA	chr5	82061222	82062152	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020079	8.438792	10.664002	-2.2252	4.675793	HIT000393188.5	HIX0094189.5	Note=/DQ668378	Alias=Non-protein coding transcript.	chr2	1.82E+08	1.82E+08	-	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00020333	8.221587	10.429929	-2.2083	4.621441	NR_049774	GI:38849024	KIAA1324	DEFINITION Homo sapiens KIAA1324 (KIAA1324), transcript variant 5, non-coding					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00021692	6.022368	8.2167458	-2.1943	4.576923	TCONS_00009598 TCONS_00010261	XLOC_004726	linc-NSUN2-2	long non-coding RNA,intergenic	chr5	73470 98	73482 25	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)

RB_p_000219766	11.81668	14.007596 73	-2.1909 1	4.565944	HIT00001942 07.12	HIX00013223. 17	Note=/M13192	Alias=Non-protein coding transcript.	chr16	72090058	72090111	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000199926	6.149747	8.317 4126 14	-2.1676 7	4.492958	ENST00000 586465	ENSG00000 0226759	RP4-737A23. 2	antisense	chr1	58328686	58346403	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000208130	6.942515	9.107 2170 76	-2.1647	4.483374	TCONS_00008412	XLOC_003857	linc-NOP14-1	long non-coding RNA,intergenic	chr4	30512280	30643441	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000239240	6.179909	8.330 9168 78	-2.1510 1	4.441379	TCONS_00008571 TCONS_00008572	XLOC_004067	linc-ANKRD50-5	long non-coding RNA,intergenic	chr4	1.28E+08	1.28E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000238763	10.24496	12.38 3434 3	-2.1384 8	4.402967	HIT00032123 8.14	HIX01671804	Note=/X07062	Alias=Non-protein coding transcript.	chr6_qbl_hap6	26151166	26153900	-	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000217128	7.581201	9.719 3888 21	-2.1381 9	4.402089	NR_046504	GI:390979617	NLGN4Y-AS1	DEFINITION Homo sapiens NLGN4Y antisense RNA 1 (NLGN4Y-AS1), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)

RB_p_00021763 1	5.554589	7.66533591 7	-2.11075	4.319149	TCONS_00020943	XLOC_010213	linc-TAOK3-5	long non-coding RNA,intergenic	chr12	1.19E+08	1.19E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021750 2	6.787903	8.88264304 9	-2.09474	4.271493	ENST00000449419	ENSG00000226688	RP11-429G19.2	processed_transcript	chr10	97634840	97667532	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021096 3	5.169925	7.25266543 2	-2.08274	4.236111	ENST00000531882	ENSG00000255175	RP11-277K23.1	lincRNA	chr11	38639878	38667906	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020082 0	9.299208	11.3674147 5	-2.06821	4.193651	ENST00000561980	ENSG00000261226	RP11-830F9.7	sense_intronic	chr16	89003186	89004164	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021334 2	6.942515	9.00702726 7	-2.06451	4.182927	NR_038441	GI:33617601 3	SLC8A1-AS1	DEFINITION Homo sapiens SLC8A1 antisense RNA 1 (SLC8A1-AS1), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00023738 6	12.79655	14.8602625 5	-2.06372	4.180617	HIT00032084 5.12	HIX00010157. 16	Note=APOC3/V01513	Alias=Non-protein coding transcript.	chr11	1.17E+08	1.17E+08	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00020541 3	5.930737	7.99435343 7	-2.06362	4.180328	TCONS_00023245 TCONS_00023630	XLOC_011430	linc-MEIS2-4	long non-coding RNA,intergen	chr15	38360990	38365188	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=

					TCONS_00023631			ic					lincRNA_catalog)
RB_p_0002276 47	7.471675	9.5225815 31	-2.0509 1	4.143662	ENST00000563063	ENSG00000259928	RP11-218M11.1	linc RNA	chr 17	28891074	28892594	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002269 66	6.409391	8.4512111 12	-2.0418 2	4.117647	ENST00000544645	ENSG00000256193	LINC00507	linc RNA	chr 12	1.28E+08	1.28E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002040 07	5.794416	7.8360503 55	-2.0416 3	4.117117	ENST00000587320	ENSG00000267325	RP11-397A16.2	linc RNA	chr 18	53443957	53448952	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002260 50	7.854868	9.8963324 04	-2.0414 6	4.116631	ENST00000447529	ENSG00000231114	AC078842.4	linc RNA	chr 7	1.37E+08	1.37E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002204 64	6.392317	8.4283601 73	-2.0360 4	4.101119	ENST00000585387	ENSG00000267364	RP11-47L3.1	linc RNA	chr 17	33640682	33651919	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002045 37	6.592457	8.6238814 9	-2.0314 2	4.088083	ENST00000426058	ENSG00000228352	RP11-537H15.3	antis ense	chr 9	34089640	34096676	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002269 82	5.741467	7.7582232 15	-2.0167 6	4.046729	TCONS_00008419	XLOC_003874	linc-ABLIM2-1	long non-codi ng RNA ,inte rgen ic	chr 4	81608511	81660422	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002008	7.487784	9.4928546 2	-2.0501	4.013928	ENST00000418 60	ENSG00000235 56	BX004987	linc RNA	chr 1	1.44E+	1.44E+	-	non-coding Gene from Gencode(http://ww

06					7	6	.7			08	08		w.gencodegenes.org/)
RB_p_00020806	7.4878784	9.4928546 2	-2.0501	4.0139 28	TCONS_00000633 TCONS_00000634	XLOC_000999	linc-FCGR1B-4	long non-coding RNA,intergenic	chr1	1.44E+08	1.44E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022684 7	7.285402	9.2900188 47	-2.0462	4.0128 21	HIT00038649 5.6	HIX0096130.6	Note=/BC108923	Alias=Non-protein coding transcript.	chr13	44774775	44775042	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00023246 0	12.47915	14.483658 35	-2.0451	4.0125 23	TCONS_00024226 TCONS_00024227 TCONS_00024856 TCONS_00024857	XLOC_011736	linc-MT1B-1	long non-coding RNA,intergenic	chr16	56673784	56678852	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022885 3	7.797662	9.8008999	-2.0324	4.0089 89	TCONS_00010158	XLOC_004624	linc-CCNG1-1	long non-coding RNA,intergenic	chr5	1.62E+08	1.62E+08	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00023808 0	12.20839	14.204189 02	-1.9958	3.9883 78	TCONS_00019713	XLOC_009508	linc-LRRC32-	long non-coding	chr11	76475919	76479444	-	non-coding Gene from JohnRinn lincRNA catalogue(http://w

							1	RNA,intergenic					ww.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00020907	6.857981	8.85330955	-1.9533	3.987069	XR_112745	GI:3101147913	LOC100505878	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100505878					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00023569	6.312883	8.28540222	-1.97252	3.924528	ENST00000567916	ENSG00000258710	RP11-810K23.3	processed_transcript	chr15	21959587	21986000	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00023119	6.108524	8.07146263	-1.96294	3.898551	XR_171897	GI:4101726368	LOC100129473	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100129473					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00021437	5.820179	7.7714894	-1.95131	3.867257	TCONS_00011994	XLOC_005508	linc-OPRM1-1	long non-coding RNA,intergenic	chr6	1.54E+08	1.54E+08	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00020820	8.124121	10.0728053	-1.9486	3.860215	ENST00000540994	ENSG00000256995	RP11-114G22.1	lincRNA	chr12	23174720	23207175	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00023912	9.704768	11.6452008	-1.9404	3.838226	NR_033931	GI:299890841	LOC152742	DEFINITION Homo sapiens uncharacterized LOC152742 (LOC152742), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00020653	6.179909	8.11894107	-1.9390	3.834483	ENST00000436334	ENSG00000177778	RP5-1061H20.4	processed_transcript	chr1	2.29E+08	2.29E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000	7.9158	9.8525295	-1.9366	3.8281	ENST00000	ENSG00000	LINC00	lincRNA	chr12	9131	9134	+	non-coding Gene from

221120	79	09	5	57	546725	196243	615			1799	2446		Gencode(http://www.gencodegenes.org/)
RB_p_00023804 3	7.159871	9.092757141	-1.93289	3.881818 2	ENST00000375204	ENSG00000254876	RP11-23J9.5	processed_transcript	chr9	1E+08	1E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020325	6.108524	8.033423002	-1.9249	3.797101	ENST00000400946	ENSG00000215808	RP11-371I1.2	lincRNA	chr1	2.39E+08	2.39E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021299	7.139551	9.057991723	-1.91844	3.780142	ENST00000399376	ENSG00000174083	PIK3R6	lincRNA	chr17	8706040	8770994	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020283 0	11.10836	13.024187 37	-1.91583	3.773299	NR_029395	GI:26127837 4	IGLL3P	DEFINITION Homo sapiens immunoglobulin lambda-like polypeptide 3, pseudogene					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00020084 6	6	7.906890596	-1.90689	3.75	ENST00000449730	ENSG00000231901	RP11-281A20.1	lincRNA	chr9	1.21E+08	1.21E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021949 1	10.77149	12.674081 9	-1.9025 9	3.738844	HIT00032123 5_03.4	HIX0166103.4	Note=/X07059	Alias=Non-protein coding transcript.	chr6_cox_hap2	14251533	14253301	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00021608	8.710806	10.612407 79	-1.9016	3.736277	NR_049773	GI:38849023 8	KIAA1324	DEFINITION Homo sapiens KIAA1324 (KIAA1324), transcript variant 4, non-coding					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000	5.6438	7.5430318	-1.8991	3.73	TCON	XLOC_0115	linc-VP	long non-	chr15	9313	9313	-	non-coding Gene from JohnRinn

207309	56	2	8		S_00023789 TCONS_00023790	85	S33B-2	coding RNA,intergenic		5801	9933		lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000235857	7	8.89633204	-1.8963	3.722656	NR_029611	GI:26220622	MIR181A2	DEFINITION Homo sapiens microRNA 181a-2 (MIR181A2), microRNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000234742	7.6147	9.5028318 04	-1.8881	3.701531	ENST00000419777	ENSG00000230500	RP11-360I20.2	antisense	chr10	28037714	28056723	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000239067	8.893302	10.780949 8	-1.8765	3.700315	ENST00000428980	ENSG00000233766	AC098617.1	antisense	chr2	1.93E+08	1.93E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000216777	8.221587	10.10328781	-1.817	3.685092	NR_033200	GI:28304677 4	LARP4	DEFINITION Homo sapiens La ribonucleoprotein domain family, member 4 (LARP4),					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000221690	10.35673	12.23152121	-1.8747 9	3.667493	HIT00032123702.4	HIX0166423.4	Note=/X07061	Alias=Non-protein coding transcript.	chr6_dbb_hap3	25321135	25323358	-	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000211062	10.25326	12.12517128	-1.8719 1	3.660168	NR_003099	GI:11034977 6	ZNF273	DEFINITION Homo sapiens zinc finger protein 273 (ZNF273), transcript variant					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000221313	12.85983	14.73139859	-1.8715 7	3.659313	XR_112327	GI:31011141 51	LOC10012943	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100129434					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/R

							4						efSeq/)
RB_p_0001998 18	7	8.8649599 15	-1.8649 6	3.6425 78	ENST00000 533301	ENSG00000 254981	RP 11-350N15 .3	antisense	chr 8	38 25 80 53	38 25 92 01	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002231 09	9.7 887 18	11.65 1051 69	-1.8623 3	3.6 359 53	NR_037932	GI:325 65186 5	AP OC 4-A PO C2	DEFINITION Homo sapiens APOC4-APOC2 readthrough (APOC4-APOC2), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002292 76	7.2 143 19	9.072 8025 35	-1.8584 8	3.6 262 63	ENST00000 464343	ENSG00000 227733	RP 4-5 65E 6.1	sense_intronic	chr 1	1. 46 E+ 08	1. 46 E+ 08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002274 43	7.2 431 74	9.095 3970 23	-1.8522 2	3.6 105 61	ENST00000 437047	ENSG00000 224884	AC 034 187 .2	linc RNA	chr 3	86 15 41 1	86 34 81 0	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002138 06	7.7 380 92	9.576 4843 47	-1.8383 9	3.5 761 12	XR_108717	GI:310 120144	LO C10 050 653 4	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100506534					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002087 13	6.5 545 89	8.392 3174 23	-1.8377 3	3.5 744 68	TCONS_00015135 TCONS_00015136 TCONS_00015488 TCONS_00015489	XLOC_007182	linc-KC NV 1-1	long non-coding RNA ,intergenic	chr 8	1. 12 E+ 08	1. 12 E+ 08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002285 89	7.8 948 18	9.715 1040 09	-1.8202 9	3.5 315 13	ENST00000 443054	ENSG00000 235566	BX 004 987 .7	linc RNA	chr 1	1. 44 E+ 08	1. 44 E+ 08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)

RB_p_00021093 2	7.159871	8.97871045 9	-1.81884	3.527972	ENST00000544815	ENSG00000256888	RP13-81N3.2	lincRNA	chr12	109219191	109300043	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022664 1	6.930737	8.74819285	-1.81746	3.52459	ENST00000438432	ENSG00000231890	AC093391.2	antisense	chr2	1.37E+08	1.37E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00023241 2	11.87123	13.6840911 1	-1.81286	3.51338	TCONS_00008102	XLOC_003569	linc-ALB-3	long non-coding RNA,intergenic	chr4	73435479	73435879	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021962 7	6.906891	8.71938882 1	-1.8125	3.5125	ENST00000413356	ENSG00000231175	RP11-463J7.2	processed_transcript	chr1	1.91E+08	1.91E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022837 8	6.044394	7.85486838 3	-1.81047	3.507576	ENST00000595686	ENSG00000226674	AC074093.1	lincRNA	chr2	1.45E+08	1.46E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020976 6	6.409391	8.21674585 8	-1.80735	3.5	ENST00000572950	ENSG00000262999	CTD-3088G3.6	antisense	chr16	11559115	11567030	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020418 4	7.044394	8.84549005 1	-1.8011	3.484848	NR_033651	GI:29584928 4	LOC100132891	DEFINITION Homo sapiens uncharacterized LOC100132891 (LOC100132891),					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00021636 0	7.353539	9.12541347	-1.79002	3.458204	ENST00000553135	ENSG00000257815	RP11-611E13.2	processed_transcript	chr12	70636268	70637138	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p	8.2	10.01	-1.7	3.4		XLOC	linc-	long	chr	51	51	+	non-coding Gene

_000220392	26412	611184	897	57429	TCONS_00024399 TCONS_00024400 TCONS_00024401 TCONS_00024402 TCONS_00024403 TCONS_00024404 TCONS_00024405	_011722	CHD9-6	non-coding RNA,intergenic	16	7887705	8474768		from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000223251	6.651052	8.43879185 3	-1.787744	3.452736	ENST00000552411	ENSG00000255794	RMST	lincRNA	chr12	97924141	97954474	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000206790	6.357552	8.144658243	-1.787111	3.45122	ENST00000436539	ENSG00000227306	AP006285.6	lincRNA	chr11	17095226	17102866	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000216953	6.707359	8.491853096	-1.78449	3.44976	ENST00000320202	ENSG00000181995	LINC00301	lincRNA	chr11	60383223	60454622	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000213224	10.88092	12.66239022	-1.78147	3.43775 7	NR_073518	GI:42983687 9	SEC11A	DEFINITION Homo sapiens SEC11 homolog A (S. cerevisiae) (SEC11A), transcript					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002251	6.8009	8.577428828	-1.7765 3	3.426009	ENST00000559 82	ENSG00000245 53	RP11-219	antisense	chr15	6077 13	6092 28	+	non-coding Gene from Gencode(http://ww

10					4	4	B17.1			76	36		w.gencodegenes.org/)
RB_p_00021124	9.122828	10.8993592	-1.7763	3.426009	NR_073093	GI:399567843	MPC1	DEFINITION Homo sapiens mitochondrial pyruvate carrier 1 (MPC1), transcript					non-coding Gene from NCBI RefseqNR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00020394	7.299208	9.06204613	-1.7628	3.393651	ENST00000436013	ENSG00000237863	RP6-24A23.3	lincRNA	chrX	1.08E+08	1.08E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022114	6.459432	8.21674585	-1.7573	3.380682	ENST00000512401	ENSG00000251577	RP11-297P16.3	processed_transcript	chr4	1.04E+08	1.05E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020053	5.409391	7.15987137	-1.7504	3.364706	TCONS_00012047	XLOC_005579	linc-MYLK4-1	long non-coding RNA,intergenic	chr6	27911411	28221433	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021618	10.18488	11.92740761	-1.7425	3.34622	HIT00019105 3_05.4	HIX0166088.4	Note=CFB/J00186	Alias=Non-protein coding transcript.	chr6_cox_hap2	3429522	3429616	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00022306	6.219169	7.95710204 2	-1.7379	3.33557	ENST00000589734	ENSG00000248015	AC005329.7	antisense	chr19	1393576	1394887	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021273 1	12.00738	13.73909496	-1.7317 2	3.321229	ENST00000454408	ENSG00000230676	RP11-65J3.3	lincRNA	chr9	1.32E+08	1.32E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)

RB_p_000199533	7.665336	9.392317423	-1.71698	3.310345	TCONS_00026233 TCONS_00026235	XLOC_012609	linc-NDC80-1	long non-coding RNA,intergenic	chr18	23505556	23712127	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000239384	7.308339	9.027905997	-1.71957	3.293375	ENST00000583782	ENSG00000264924	RP11-799B12.2	antisense	chr18	21693600	21700967	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000212772	6.857981	8.577428828	-1.71945	3.293103	ENST00000311434	ENSG00000174083	PIK3R6	lincRNA	chr17	8706054	8770994	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000236927	6.906891	8.623881449	-1.71699	3.2875	ENST00000433690	ENSG00000233203	RP11-67L3.4	antisense	chr1	55353404	55354523	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000209065	7.027906	8.744833837	-1.71693	3.287356	ENST00000444501	ENSG00000226833	AC097724.3	antisense	chr2	28945305	28958975	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000235748	7.592457	9.308339033	-1.71588	3.284974	ENST00000584485	ENSG00000237298	TTN-AS1	antisense	chr2	1.8E+08	1.8E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000210183	7.810572	9.524541715	-1.71397	3.280624	ENST00000571340	ENSG00000262714	RP11-44F14.8	lincRNA	chr16	53420855	53422997	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000236039	6.607373	8.317412614	-1.71008	3.271795	TCONS_00001528	XLOC_000877	linc-ELTD1-3	long non-coding RNA,inte	chr1	79490857	79493876	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/h

								rgenic					uman_lincrnas/?q=lincRNA_catalog)
RB_p_00022421	8.118941	9.82097669	-1.70204	3.253597	ENST00000453023	ENSG00000225783	MIAT	lincRNA	chr22	27053577	27061757	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020689	5.523562	7.222400167	-1.70044	3.25	ENST00000596092	ENSG00000229240	RP1-251M9.1	lincRNA	chr10	109880809	109941443	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021196	5.523562	7.222400167	-1.70044	3.25	TCONS_00007367 TCONS_00007416 TCONS_00007699 TCONS_00007700 TCONS_00008380 TCONS_00008381 TCONS_00008979	XLOC_003834	linc-FRG1-10	long non-coding RNA,intergenic	chr4	1.89E+08	1.9E+08	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021061	11.79685	13.4959174	-1.69907	3.246908	XR_159412	GI:397138245	LOC100506907	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100506907, transcript					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00019995	6.129283	7.823367 24	-1.6940 8	3.235714	ENST00000589853	ENSG00000234945	AC109828.1	antisense	chr2	27560089	27564631	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)

RB_p_000207991	7.503826	9.19475685 4	-1.6909 3	3.22865	NR_024079	GI:1962598 28	LINC00471	DEFINITION Homo sapiens long intergenic non-protein coding RNA 471					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000200856	6.539159	8.22641219 3	-1.6872 5	3.22043	XR_113169	GI:4101701 96	LOC100507018	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100507018					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000212698	7.804131	9.49085087 7	-1.6867 2	3.21923 9	ENST00000567093	ENSG00000260417	CTD-2542L18.1	sense_overlapping	chr16	85625871	85629326	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000217839	6.426265	8.10328787 08	-1.6770 2	3.19767 4	ENST00000565625	ENSG00000261122	RP11-352B15.1	lincRNA	chr16	34982727	34990167	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000200036	7.962896	9.63662462 1	-1.6737 3	3.19038 1	NR_027407	GI:2257031 25	GOLGA8DP	DEFINITION Homo sapiens golgin A8 family, member D, pseudogene (GOLGA8DP),					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000208363	8.997179	10.66977089	-1.6725 9	3.18787 7	ENST00000455791	ENSG00000213742	RP4-694B14.5	antisense	chr20	25604694	25657688	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000212975	10.79076	12.46109 57	-1.6703 4	3.18289 6	ENST00000596960	ENSG00000268544	RP11-277L2.4	lincRNA	chr1	1.5E+08	1.5E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000204405	6.044394	7.71424555 18	-1.6698 5	3.18181 8	ENST00000457106	ENSG00000224702	RP11-38C18.2	antisense	chr1	1.65E+08	1.65E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000216800	9.255029	10.91662592	-1.6616	3.16366	ENST00000494582	ENSG00000214381	LINC00488	lincRNA	chr3	1.09E+08	1.09E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.o

													rg/)
RB_p_000239568	8.693487	10.34429591	-1.6508 1	3.140097	ENST00000596964	ENSG00000268316	AC006272.2	lincRNA	chr19	52343023	52344198	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000226985	6.665336	8.312882955	-1.6475 5	3.133005	TCONS_00023518	XLOC_011360	linc-MCTP2-5	long non-coding RNA,intergenic	chr15	93916794	93919457	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000223400	8.005625	9.647458426	-1.6418 3	3.120623	TCONS_00013948	XLOC_006597	linc-LRRC4-1	long non-coding RNA,intergenic	chr7	1.28E+08	1.28E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000220415	5.584963	7.224001674	-1.6390 4	3.114583	ENST00000436329	ENSG00000236520	GPC6-AS1	antisense	chr13	94806446	94840245	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000214285	8.507795	10.14433959	-1.6365 4	3.109203	ENST00000420964	ENSG00000243558	RP11-181G12.5	processed_transcript	chr1	21436009	21440013	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000210285	6.787903	8.419960178	-1.6320 6	3.099548	NR_029973	GI:262205491	MIR452	DEFINITION Homo sapiens microRNA 452 (MIR452), microRNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000200859	8.139551	9.768184325	-1.6286 3	3.092199	ENST00000555255	ENSG00000258785	CTD-2643K12.2	lincRNA	chr15	94443929	94527379	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000	7.2336	8.8595347	-1.6259	3.0863	ENST00000	ENSG00000	RP11-	antisense	chr12	1.16	1.16	+	non-coding Gene from

203245	2	86	2	79	549725	258034	493P1.2			E+08	E+08		Gencode(http://www.gencodegenes.org/)
RB_p_000230222	7.118941	8.7380922 6	-1.61915	3.071942	ENST00000582301	ENSG00000240498	CDKN2B-AS1	antisense	chr9	219949000	220778 89	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000222260	12.0189	13.630210 24	-1.61131	3.055301	NR_027463	GI:2263716 15	SHBG	DEFINITION Homo sapiens sex hormone-binding globulin (SHBG), transcript					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000239063	6.357552	7.968666793	-1.61111	3.054878	ENST00000567594	ENSG00000260233	RP11-856B14.1	processed_transcript	chr11	653371 30	653377 44	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000199975	6.554589	8.164906927	-1.61032	3.053191	ENST00000382167	ENSG00000205866	FAM99A	processed_transcript	chr11	168682 6	168908 6	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000219680	11.87537	13.484256 48	-1.60889	3.050173	HIT00001012 71.11	HIX0021628.18	Note=/D28442	Alias=Non-protein coding transcript.	chr16	566424 96	566425 73	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000228928	7.455327	9.062046138	-1.60672	3.045584	ENST00000412244	ENSG00000230500	RP11-360I20.2	antisense	chr10	280505 17	280567 22	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000216802	9.503826	11.109177 7	-1.60535	3.0427	ENST00000520171	ENSG00000253427	RP11-103H7.1	lincRNA	chr8	1.27E+08	1.28E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000	5.5545	7.1598713	-1.6052	3.0425	ENST00000	ENSG00000	RP11-	lincRNA	chr3	1.27	1.27	-	non-coding Gene from

211678	89	37	8	53	461398	239921	59J16.1			E+08	E+08		Gencode(http://www.gencodegenes.org/)
RB_p_000212806	7.189825	8.7944158 66	-1.60459	3.041096	ENST00000584276	ENSG00000266601	RP11-6N17.3	antisense	chr17	46007047	46010472	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000221836	7.214319	8.8169836 23	-1.60266	3.037037	HIT000387884.6	HIX0015778.19	Note=DLGAP4/BC118623	Alias=Non-protein coding transcript.	chr20	35156273	35156458	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000221949	8.335339	9.9307373 38	-1.59535	3.021672	ENST00000582145	ENSG00000196295	AC005154.6	processed_transcript	chr7	30601177	30612716	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000209750	9.957828	11.549664 36	-1.59184	3.014329	ENST00000415575	ENSG00000234763	RP11-203H2.2	lincRNA	chr6	83421699	83432544	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000209750	9.957828	11.549664 36	-1.59184	3.014329	TCONS_00011444	XLOC_005599	linc-EEF1E1-1	long non-coding RNA,intergenic	chr6	83421699	83432544	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000233104	9.068778	10.655083 45	-1.58631	3.002793	ENST00000415249	ENSG00000223665	CTB-111F10.1	lincRNA	chr7	91268161	91272827	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000233104	9.068778	10.655083 45	-1.58631	3.002793	TCONS_00013206	XLOC_006522	linc-MGC26647	long non-coding	chr7	91268161	91272827	-	non-coding Gene from JohnRinn lincRNA catalogue(http://w

							-1	RNA,intergenic					ww.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000223393	10.81858	12.404474243	-1.58616	3.002492	NR_024354	GI:211904175	CHODL-AS1	DEFINITION Homo sapiens CHODL antisense RNA 1 (CHODL-AS1), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000224557	9.109831	10.695663	-1.5858	3.00181	HIT00003036 65.11	HIX00016703.19	Note=SAT1/CR624470	Alias=Non-protein coding transcript.	chrX	23803882	23804327	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000211691	5.672425	7.257387843	-1.58496	3	TCONS_00019738	XLOC_009531	linc-CCDC82-2	long non-coding RNA,intergenic	chr11	97933034	97940762	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000214463	6.475733	8.060695932	-1.58496	3	TCONS_00000855	XLOC_000076	linc-C1orf151-2	long non-coding RNA,intergenic	chr1	19658089	19660931	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000235940	7.049849	9.416797528	-2.36695	5.158491	NA	ENST00000418426	ENSG00000284 26	RP11-402L1.11	lincRNA	chr10	44161115	44162453	+ non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000235940	7.049849	9.416797528	-2.36695	5.158491	NA	TCONS_00017820	XLOC_00847	linc-TMEM72-5	long non-co	chr10	44161115	44162453	+ non-coding Gene from JohnRinn lincRNA

							0		ding RNA,intergenic					catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022043434	6.459432	8.816983623	-2.35755	5.125	NA	ENST00000430125	ENSG00000227659	CLYBL-AS2	antisense	chr13	1E+08	1E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00023122727	8.930737	11.28554671	-2.3548 1	5.115266	NA	XR_159474	GI:410170154	LOC100996298	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100996298			non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)		
RB_p_00020691515	13.05825	15.41127926	-2.35303	5.108975	NA	TCONS_00006556 TCONS_00007196 TCONS_00007197 TCONS_00007198	XLOC_003181	linc-DHFRL1-4	long non-coding RNA,intergenic	chr3	96335998	96337060	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021088733	13.38633	15.73383625	-2.3475	5.089423	NA	NR_031675	GI:269847380	MIR1273A	DEFINITION Homo sapiens microRNA 1273a (MIR1273A), microRNA.			non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)		
RB_p_00021062	7.35339	9.6750749 2	-2.3396 8	5.06192	NA	NR_003287	GI:225637	RNA28S5	DEFINITION Homo sapiens			non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nl		

92							499		RNA, 28S ribosomal 5 (RNA28S5), ribosomal RNA.					m.nih.gov/RefSeq/)
RB_p_0002347 75	6.139551	8.4757334 31	-2.33618	5.049645	NA	ENST00000502951	ENSG00000177369	RP1-62O9.3	lincRNA	chr17	47325617	47330056	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002395 70	13.21818	15.549649 32	-2.33146	5.03316	NA	HIT00027306 4.11	HIX0031183.13	Note=/CR593869	Alias=Non-protein coding transcript.	chr3	96336366	96337000	-	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_0002045 48	5.930737	8.2620948 45	-2.33136	5.032787	NA	ENST00000563946	ENSG00000261305	RP4-584D14.7	sense_overlapping	chr7	1.5E+08	1.5E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002263 26	6.924813	9.2514824 11	-2.33667	5.016461	NA	ENST00000441345	ENSG00000250608	RP11-933H2.4	processed_transcript	chr3	1.31E+08	1.31E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002303 05	10.79035	13.115450 12	-2.3251	5.011011	NA	NR_028412	GI:257470990	APOC1P1	DEFINITION Homo sapiens apolipoprotein C-I pseudogene 1 (APOC1P1), transcript					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p	8.5	10.84	-2.3	4.9	NA	NR_0	GI:	LOC	DEFINITION					non-coding Gene from

_000206527	25521	156435	1604	79647		03602	392871547	541473	Homo sapiens FK506 binding protein 6, 36kDa pseudogene (LOC541473),						NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)	
RB_p_00022020283	11.04729	13.353077789	-2.30578	4.944359	NA	NR_003266	GI:195539381	LOC220729	DEFINITION Homo sapiens succinate dehydrogenase complex, subunit A,						non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)	
RB_p_00021648028	6.348728	8.649256178	-2.30053	4.92638	NA	XR_171526	GI:410172001	LOC100130172	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100130172						non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)	
RB_p_00021680202	9.938844	12.238106 14	-2.29926	4.922058	NA	ENST00000520171	ENSG00000253427	RP11-103H7.1	lincRNA	chr8	1.27E+08	1.28E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)		
RB_p_00021333224	10.785 4501	13.079401 45	-2.29395	4.903966	NA	ENST00000551893	ENSG00000258343	RP11-536G4.2	processed_transcript	chr12	96252014	96252576	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)		
RB_p_00022974242	6.948367	9.2288186 9	-2.28045	4.8583	NA	ENST00000463703	ENSG00000242428	RP11-147N17.1	antisense	chr3	58810196	58956386	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)		
RB_p_000	8.9410	11.208843	-2.2678	4.8158	NA	XR_171621	GI:410	LOC100	DEFINITION PREDICTED						non-coding Gene from NCBI Refseq	

225134	48	99		7			172130	996298	: Homo sapiens uncharacterized LOC100996298			NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)		
RB_p_0002262654	7.554589	9.7665289 09	-2.21194	4.632979	NA	ENST00000059036 4	ENSG00000267613	RP11-378E13.4	antisense	chr17	35768022	35768681	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002182885	6.72792	8.9307373 38	-2.20282	4.603774	NA	ENST00000060896	ENSG00000269543	CTD-2291D10.3	lincRNA	chr19	23251274	23254244	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002079776	9.442943	11.642277 38	-2.19933	4.592672	NA	ENST00000587348	ENSG00000267615	RP11-552F3.13	antisense	chr17	73939912	73941223	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002099915	7.214319	9.4083297 41	-2.19401	4.575758	NA	ENST00000399104	ENSG00000214851	LINC00612	lincRNA	chr12	92101333	92176772	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002238220	9.222795	11.408064 32	-2.18527	4.548117	NA	ENST00000509506	ENSG00000249100	CTD-2218K11.2	lincRNA	chr5	82061222	82062152	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002340255	7.447083	9.6193029 55	-2.17222	4.507163	NA	eHIT000008305.2	HIX0212639.2	Note=/	Alias=Non-protein coding	chr18	76737254	76738803	-	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)

									transcript.					
RB_p_00021457	8.346514	10.514714 05	-2.1682	4.494624	NA	TCONS_00001103	XLOC_000346	linc-CTTNBP2NL-1	long non-coding RNA,intergenic	chr1	1.13E+08	1.13E+08	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00020126 4	13.454 43	15.61 8098 68	-2.1636 7	4.480535	NA	HIT00032598 6.10	HIX0080295.10	Note=/Y17174	Alias=Non-protein coding transcript.	chrM	1992	2233	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00021448 4	6.294621	8.438 7918 53	-2.1441 7	4.420382	NA	ENST00000 446816	ENSG00000 204685	AC012307.3	processed_transcript	chr2	96874153	96908332	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00023738 6	12.710 91	14.84 9453 97	-2.1385 4	4.403162	NA	HIT00032084 5.12	HIX0010157.16	Note=APOC3/V01513	Alias=Non-protein coding transcript.	chr11	1.17E+08	1.17E+08	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000	7.6036	9.732 1674	-2.1285	4.3727	NA	ENST00000	ENSG	RP11-91	lincRN	chr8	6157	615770	+	non-coding Gene from

234205	26	26	4	51		373384	00000255289	I20.1	A		3378	89		Gencode(http://www.gencodegenes.org/)
RB_p_0002134 92	9.568906	11.693704 74	-2.1248	4.361422	NA	TCONS_00025163 TCONS_00025164 TCONS_00025343 TCONS_00025344	XLOC_012160	linc-PIPOX-1	long non-coding RNA,intergenic	chr17	27339798	27343731	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002083 63	9.531381	11.655642 52	-2.12426	4.359797	NA	ENST00000455791	ENSG00000213742	RP4-694B14.5	antisense	chr20	25604694	25657688	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002172 08	10.482 81	12.604089 86	-2.12128	4.350804	NA	ENST00000513032	ENSG00000251160	RP11-399D2.1	processed_transcript	chr4	36008244	36047656	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002045 37	6.72792	8.8486229 4	-2.1207	4.349057	NA	ENST00000426058	ENSG00000228352	RP11-537H15.3	antisense	chr9	34089640	34096676	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002212 82	6.546894	8.649256178	-2.10236	4.294118	NA	ENST00000437181	ENSG00000233926	RP11-154D17.1	lincRNA	chr9	84304627	84391815	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002090	7.214319	9.302638924	-2.08832	4.252525	NA	ENST00000444450	ENSG000	AC097724.3	antisense	chr2	28943	28958975	-	non-coding Gene from Gencode(http://

65						1	00226833				05			www.gencodegenes.org/)
RB_p_00021304	12.35604	14.434400	-2.07836	4.223271	NA	NR_039802	GI:337756606	MIR4658	DEFINITION Homo sapiens microRNA 4658 (MIR4658), microRNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00021285	10.59246	12.670766	-2.07831	4.223122	NA	NR_026645	GI:221136823	DET1	DEFINITION Homo sapiens de-etiolated homolog 1 (Arabidopsis) (DET1),					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00023657	11.30976	13.375616	-2.06586	4.186823	NA	eHIT000015395.2	HIX0203996.2	Note=/	Alias=Non-protein coding transcript.	chr2	2.14E+08	2.14E+08	-	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00020857	10.48129	12.546894	-2.0656	4.186079	NA	ENST000004580016	ENSG00000268677	RP11-575L7.2	antisense	chr9	86445570	86452502	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021624	6.266787	8.321928095	-2.05514	4.155844	NA	TCONS_00020230	XLOC_009631	linc-CD9-1	long non-coding RNA,intergeni	chr12	63015622	63075005	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)

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RB_p_00021803 2	7.361944	9.408329741	-2.04639	4.130699	NA	XR_110237	GI:310123145	LOC283588	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC283588 (LOC283588),					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00020611 7	6.546894	8.588714636	-2.04182	4.117647	NA	TCONS_00028452 TCONS_00028710	XLOC_013812	linc-BMP7-1	long non-coding RNA,intergenic	chr20	55849536	55869440	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00023327 5	6.139551	8.172427509	-2.03288	4.092199	NA	TCONS_00011801	XLOC_005277	linc-ZFAND3-3	long non-coding RNA,intergenic	chr6	37468256	37470210	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022735 3	9.931476	11.96397979	-2.0325	4.091142	NA	ENST00000450157	ENSG00000182109	RP11-69E11.4	processed_transcript	chr1	39987951	40007432	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020082 0	9.448116	11.47471995	-2.0266	4.074445	NA	ENST00000561980	ENSG00000261226	RP11-830F9.7	sense_intronic	chr16	89003186	89004164	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)

RB_p_00021869	6.900867	8.92184093	-2.02097	4.058577	NA	NR_024623	GI:219277616	C21orf49	DEFINITION Homo sapiens chromosome 21 open reading frame 49 (C21orf49),					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)	
RB_p_00020657	6.672425	8.689997971	-2.01757	4.04902	NA	TCONS_00001880	XLOC_001263	linc-IRF2BP2-4	long non-coding RNA,intergenic	chr1	2.35E+08	2.35E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)	
RB_p_00020000 68	6.826548	8.836050355	-2.0095	4.026432	NA	ENST00000419237	ENSG00000225783	MIAT	lincRNA	chr22	27053552	27062002	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)	
RB_p_00022227 27	6.475733	8.483815777	-2.00808	4.022472	NA	ENST00000446528	ENSG00000223745	RP4-717I23.3	processed_transcript	chr1	93730201	93792474	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)	
RB_p_00023902 6	11.80836	13.814532 4	-2.00617	4.017148	NA	NR_039705	GI:337757007	MIR4485	DEFINITION Homo sapiens microRNA 4485 (MIR4485), microRNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)	
RB_p_00023869 8	6.72792	8.722807531	-1.99489	3.985849	NA	TCONS_00009735 TCONS_000	XLOC_004939	linc-CHD1-1	long non-coding	chr5	99989791	99993674	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstit	

						09736			RNA,intergenic					ute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000225684	8.599913	10.5915223535	-1.99161	3.976804	NA	ENST00000574885	ENSG00000262884	CTD-3060P21.1	antisense	chr17	28654541	28691889	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000228193	7.894818	9.882643049	-1.98783	3.966387	NA	NR_029490	GI:262205644	MIR19B1	DEFINITION Homo sapiens microRNA 19b-1 (MIR19B1), microRNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000231682	7.562242	9.548821908	-1.98658	3.962963	NA	ENST00000533091	ENSG00000204241	RP11-713P17.3	lincRNA	chr11	1.34E+08	1.34E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000228002	10.1472	12.12912199	-1.98192	3.950176	NA	ENST00000521383	ENSG00000247081	RP11-318M2.2	lincRNA	chr8	1.04E+08	1.04E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000233644	6.179909	8.157346935	-1.97744	3.937931	NA	ENST00000532116	ENSG00000175773	RP11-121M22.1	lincRNA	chr11	1.3E+08	1.3E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000224473	7.754888	9.726218159	-1.97133	3.921296	NA	ENST00000422415	ENSG00000226764	AC010145.4	lincRNA	chr2	161371170	16203007	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000	7.7548	9.7262181	-1.9713	3.9212	NA	TCON	XLOC	linc-NBA	long	chr2	1613	162030	-	non-coding Gene from

224473	88	59	3	96		S_00003212	_001998	S-2	non-coding RNA,intergenic		7170	07		JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002007991	9.162391	11.1333302	-1.9709	3.920157	NA	HIT00039318.5	HIX0094189.5	Note=/DQ668378	Alias=Non-protein coding transcript.	chr2	1.82E+08	1.82E+08	-	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_0002145432	13.07448	15.0411671 6	-1.9666 9	3.908706	NA	HIT00027158 8.13	HIX0032090.14	Note=/CR592393	Alias=Non-protein coding transcript.	chr5	7994724 1	79947865	-	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_0002346 73	8.95565	10.9097056 1	-1.9540 6	3.874622	NA	NR_026923	GI:223941907	LOC643387	DEFINITION Homo sapiens TAR DNA binding protein pseudogene (LOC643387),					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002270 15	6.546894	8.4978518 37	-1.9509 6	3.866 31	NA	ENST00000508352	ENSG00000 2506	RP11-1E6.1	lincRNA	chr4	433448 13	43347615	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)

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RB_p_0002228 65	6.794416	8.74146698 6	-1.9470 5	3.855856	NA	ENST00000 565127	ENSG00000 261307	RP11-157P2 3.2	lincRNA	chr18	45027542	45084754	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002324 12	13.27496	15.22054838	-1.9455 9	3.851947	NA	TCONS_00008102	XLOC_003569	linc-ALB-3	long non-coding RNA,intergenic	chr4	73435479	73435879	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002110 62	10.50532	12.44889063	-1.9435 8	3.846577	NA	NR_003099	GI:110349776	ZNF273	DEFINITION Homo sapiens zinc finger protein 273 (ZNF273), transcript variant					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002196 13	6.312883	8.252665432	-1.9397 8	3.836478	NA	XR_171287	GI:410171620	LOC100505774	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100505774					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002319 67	9.167418	11.10656294	-1.9391 4	3.834783	NA	NR_034115	GI:300796161	STXBP5-AS1	DEFINITION Homo sapiens STXBP5 antisense RNA 1 (STXBP5-AS1), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)

RB_p_00021240 4	11.02167	12.947591 28	-1.9259 2	3.799784	NA	TCONS_00017722	XLOC_000866 2	linc-MGMT-4	long non-coding RNA,intergenic	chr10	1.3E+08	1.3E+08	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022325 4	7.804131	9.726218159	-1.9220 9	3.789709	NA	XR_109864	GI:310118501	LOC100505887	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100505887, transcript	non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)				
RB_p_00023230 5	12.56796	14.485231 83	-1.9172 8	3.777092	NA	HIT00000668 19_04.4	HIX0172826.4	Note=/AF085940	Alias=Non-protein coding transcript.	chr15	28839837	28840249	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00021157 6	6.312883	8.2288186 9	-1.9159 4	3.773585	NA	TCONS_00028615	XLOC_013649	linc-PAK7-1	long non-coding RNA,intergenic	chr20	10298533	10299368	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021029	5.83289	7.741466986	-1.9085 8	3.754386	NA	ENST00000051466	ENSG000	RP11-79P5.2	lincRNA	chr5	72742 21	72742811	+	non-coding Gene from Gencode(http://

88						1	00247993				83		www.gencodegenes.org/)
RB_p_00021028	5.832289	7.74146698	-1.90858	3.754386	NA	TCONS_00009423	XLOC_004426	linc-BTF3-2	long non-coding RNA,intergenic	chr5	72742183	72742811	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00023398 7	6.607337	8.513727596	-1.9064	3.748718	NA	NR_027066	GI:224458297	LINC00114	DEFINITION Homo sapiens long intergenic non-protein coding RNA 114					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00021143 9	7.569856	9.472690839	-1.90284	3.739474	NA	NR_073464	GI:425044624	MED21	DEFINITION Homo sapiens mediator complex subunit 21 (MED21), transcript					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00021539 2	7.361944	9.257387843	-1.89544	3.720365	NA	ENST00000503504	ENSG00002500061	RP11-541P9.3	antisense	chr5	1.63E+08	1.63E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022920 3	7.400879	9.294620749	-1.89374	3.715976	NA	ENST00000445225	ENSG00002321 51	RP11-277L2.2	processed_transcript	chr1	1.5E+08	1.5E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00023247	12.78831	14.67496462	-1.88665	3.697766	NA	TCONS_000	XLOC_01	linc-MT1B-1	long non	chr16	56673	56678852	+	non-coding Gene from JohnRinn

60						24226 TCONS_00024227 TCONS_00024856 TCONS_00024857	1736		-coding RNA,intergenic		84		lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022131 4	10.32193	12.207014 32	-1.8509	3.6937 5	NA	TCONS_00012896	XLOC_006305	linc-EN2-2	long non-coding RNA,intergenic	chr7	1.55E+08	1.55E +08	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022103 2	6.228819	8.113742166	-1.8492	3.6933 33	NA	ENST00000539163	ENSG00000241388	HNF1A-AS1	antisense	chr12	1.21E+08	1.21E +08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022103 2	6.228819	8.113742166	-1.8492	3.6933 33	NA	NR_024345	GI:211064492	HNF1A-AS1	DEFINITION Homo sapiens HNF1A antisense RNA 1 (HNF1A-AS1), non-coding RNA.		non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)		
RB_p_00020320 8	6.159871	8.041659152	-1.8179	3.6853 15	NA	ENST00000590845	ENSG00000267053	CTD-3162L10.1	lincRNA	chr19	36798099	36803562	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000	8.4978	10.376668	-1.788	3.6777	NA	ENST00000	ENSG	RP11-18	linc RN	chr3	1.2E	1.2E+	+	non-coding Gene from

203099	52	06	2	32		485898	00000242622	H7.1	A		+08	08		Gencode(http://www.gencodegenes.org/)
RB_p_000227151	9.091435	10.9636186	-1.87218	3.60862	NA	TCONS_00026972	XLOC_013024	linc-VSTM2B-9	long non-coding RNA,intergenic	chr19	28352560	28357463	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000220227	7.016808	8.8841705 19	-1.8673 6	3.6486 49	NA	ENST00000583854	ENSG00000263574	CTD-2532D12.4	lincRNA	chr17	71739392	71752696	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000219670	7.353147	9.2203783 28	-1.8672 3	3.6483 18	NA	ENST00000586373	ENSG00000267603	RP11-1064E11.1	lincRNA	chr17	68047417	68064236	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000222501	8.271463	10.138271 8	-1.8668 1	3.6472 49	NA	TCONS_00009283 TCONS_00009676 TCONS_00010937	XLOC_004844	linc-C5orf43-5	long non-coding RNA,intergenic	chr5	61028616	61031526	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000217109	12.93544	14.7942888 93	-1.8588 5	3.6271 78	NA	NR_002934	GI:141801873	LOC619207	DEFINITION Homo sapiens scavenger receptor protein family					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)

									member (LOC619207),					
RB_p_00020171767	7.262095	9.11634396 1	-1.85425	3.615635	NA	NR_030346	GI:262206072	MIR616	DEFINITION Homo sapiens microRNA 616 (MIR616), microRNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00022310985	10.25385	12.10509005	-1.85124	3.608108	NA	NR_037932	GI:325651865	APOC4-APOC2	DEFINITION Homo sapiens APOC4-APOC2 readthrough (APOC4-APOC2), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00022600785	12.27772	14.12601877	-1.8483	3.600745	NA	NR_024357	GI:227499780	LINC00113	DEFINITION Homo sapiens long intergenic non-protein coding RNA 113					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00022636386	11.19152	13.038576 1	-1.84705	3.597648	NA	TCONS_00007180 TCONS_00007181 TCONS_00007182	XLOC_003149	linc-ADAMTS9-2	long non-coding RNA,intergenic	chr3	64928164	64973762	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00023186464	6.442943	8.287712 38	-1.84477	3.591954	NA	ENST00000415989	ENSG00000214837	RP11-261C10.3	processed_transcript	chr1	2.43E+08	2.43E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)

RB_p_00023027 5	8.848623	10.685188	-1.83656	3.571584	NA	ENST00000413763	ENSG00000226854	RP11-212D3.4	lincRNA	chrX	75122939	75124693	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00023027 5	8.848623	10.685188	-1.83656	3.571584	NA	TCONS_00016997	XLOC_008018	linc-CXorf26-1	long non-coding RNA,intergenic	chrX	75122939	75124693	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00020236 7	6.741467	8.577428828	-1.8359 6	3.570093	NA	ENST00000518687	ENSG00000253300	RP11-108E14.1	lincRNA	chr8	20525348	20557645	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021736 2	8.182394	10.018200 18	-1.8358 1	3.569707	NA	ENST00000366321	ENSG00000203506	RBMS3-AS2	antisense	chr3	29657465	29684300	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022957 4	8.546894	10.378294 86	-1.8314	3.558824	NA	ENST00000499096	ENSG00000247049	CTC-338M12.7	antisense	chr5	1.81E+08	1.81E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020025 6	12.8011	14.630523 1	-1.8294 2	3.553944	NA	HIT00003955 26.5	HIX0014182.18	Note=/EF491799	Alias=Non-protein coding tran	chr17	73648528	73654440	-	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)

									script.					
RB_p_00021428 5	8.887221	10.71510401	-1.82788	3.550158	NA	ENST00000420964	ENSG00000243558	RP11-181G12.5	processed_transcript	chr1	214360 9	214401 3	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022339 3	13.4739	15.2990112 1	-1.82512	3.543353	NA	NR_024354	GI:211904175	CHODL-AS1	DEFINITION Homo sapiens CHODL antisense RNA 1 (CHODL-AS1), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00022320 9	8.8454 9	10.66666784	-1.82118	3.533696	NA	ENST00000520603	ENSG00000254001	RP11-91P17.1	lincRNA	chr8	790645 56	790661 48	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00023628 5	8.529431	10.34983409	-1.8204	3.5318	NA	NR_027282	GI:224589122	LOC399815	DEFINITION Homo sapiens chromosome 10 open reading frame 88 pseudogene					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00020738 1	7.882643	9.703038389	-1.8204	3.53178	NA	ENST00000597974	ENSG00000230102	RP11-407B7.1	lincRNA	chr3	1.94E+08	1.94E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020034 1	6.266787	8.082149041	-1.81536	3.519481	NA	TCONS_00003443	XLOC_002403	linc-EVX2-4	long non-coding	chr2	1.77E+08	1.77E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstit

									RNA,intergenic					ute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022272 75	11.80514	13.616950 81	-1.8118 1	3.510829	NA	HIT00033338 32.9	HIX0060138.9	Note=/BC017047	Alias=Non-protein coding transcript.	chrM	217	377	-	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00020217 77	11.18766	12.997091 25	-1.8094 3	3.505038	NA	TCONS_00019574	XLOC_009373	linc-ZBED5-1	long non-coding RNA,intergenic	chr11	11173943	11177996	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021520 9	7.647458	9.456354415	-1.8089	3.503741	NA	ENST00000525594	ENSG00000254459	RP11-91P24.7	processed_transcript	chr11	77540699	77583308	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020550 3	8.092757	9.899356923	-1.8066	3.498168	NA	NR_027048	GI:224451048	LINC00282	DEFINITION Homo sapiens long intergenic non-protein coding RNA 282					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00020116 4	6.139551	7.945443836	-1.8058 9	3.496454	NA	ENST00000419211	ENSG000002	AC015987.1	processed_tra	chr7	1.36E+08	1.36E+08	+	non-coding Gene from Gencode(http://www.gencodeg

							24746		nscript					enes.org/)
RB_p_0002340 94	8.638436	10.439830 88	-1.8013 9	3.4855 71	NA	HIT00032396 4.10	HIX0040884.14	Note=/X83516	Alias=Non-protein coding transcript.	chr21	38103346	38103452	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_0002071 75	6.888743	8.689997971	-1.8012 5	3.4852 32	NA	ENST00000504737	ENSG00000250592	RP11-39E3.3	processed_transcript	chr3	1.31E+08	1.31E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002349 94	12.81618	14.617008 23	-1.8008 2	3.4841 93	NA	ENST00000596050	ENSG00000236778	INTS6-AS1	lincRNA	chr13	52026503	52124028	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002133 87	7.724514	9.518653156	-1.7941 4	3.4680 85	NA	ENST00000412353	ENSG00000226009	RP11-190J1.10	antisense	chr10	1.04E+08	1.04E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002011 43	6.826548	8.616548844	-1.79	3.4581 5	NA	ENST00000501918	ENSG00000245385	RP11-334E6.10	antisense	chr11	1.19E+08	1.19E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002132 49	7.290019	9.078150808	-1.7881 3	3.4536 74	NA	ENST00000570137	ENSG00000261128	RP11-18F14.2	lincRNA	chr16	80631802	80636416	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p	5.9	7.693	-1.7	3.4	NA	ENST	EN	STA	linc	ch	74	743	+	non-coding

_000222883	06891	486957	866	5		0000051760 4	SG000002533 02	U2-AS1	RNA	r8	3323 08	53761		Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000206655	6.266787	8.052568051	-1.78578	3.448052	NA	XR_171479	GI:410171924	LOC100996305	DEFINITION PREDICTED: Homo sapiens uncharacterized LOC100996305			non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)		
RB_p_000231491	11.66411	13.4489228 8	-1.78481	3.445728	NA	ENST0000048157 6	ENSG00000242797	GLYCTK-AS1	processed_transcript	chr3	5232259 5	52323292	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000235550	9.15861	10.93221475	-1.77361	3.419073	NA	ENST0000058639 1	ENSG00000267146	RP11-383D22.1	antisense	chr18	5453989 8	54541201	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000229327	12.51619	14.285980 11	-1.76979	3.410038	NA	TCONS_00020848	XLOC_010133	linc-OSBPL8-1	long non-coding RNA,intergenic	chr12	7708629 9	77088341	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000211107	10.25503	12.022281 11	-1.76725	3.404051	NA	HIT00021647 0.13	HIX0008469.16	Note=/S73202	Alias=Non-protein coding	chr9	1.33E+08	1.33E+08	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)

									transcript.				
RB_p_0002192 30	6.864186	8.631177056	-1.76699	3.403433	NA	ENST00000417931	ENSG00000227244	RP11-322C8.2	lincRNA	chr10	62776032	62786178	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002066 82	7.672425	9.4325419	-1.76012	3.387255	NA	ENST00000420074	ENSG00000215424	MCM3AP-AS1	antisense	chr21	47644937	47655367	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002394 91	7.894818	9.649256178	-1.7544	3.373955	NA	HIT00024817 6.11	HIX0009501.18	Note=NAV2/AJ488206	Alias=Non-protein coding transcript.	chr11	19798998	19799063	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_0002047 99	9.395534	11.14911199	-1.75358	3.371938	NA	NR_031737	GI:269847660	MIR1973	DEFINITION Homo sapiens microRNA 1973 (MIR1973), microRNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002191 82	7.511753	9.262094845	-1.75034	3.364384	NA	TCONS_00014536	XLOC_007218	linc-FAM84B-10	long non-coding RNA,intergenic	chr8	1.29E+08	1.29E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)

RB_p_0002314337	6.139551	7.888743249	-1.74919	3.361702	NA	ENST00000454857	ENSG00000177640	CASC2	lincRNA	chr10	1.2E+08	1.2E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002160444	6.459432	8.2070142	-1.74758	3.357955	NA	ENST00000451090	ENSG00000235215	RP11-145M4.2	lincRNA	chr1	595216770	59543788	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002160444	6.459432	8.2070142	-1.74758	3.357955	NA	TCONS_00000527	XLOC_000849	linc-JUN-5	long non-coding RNA,intergenic	chr1	595216770	59543788	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002182664	8.353539	10.08248173	-1.74709	3.356811	NA	ENST00000513836	ENSG00000251266	RP11-340A13.2	lincRNA	chr4	598499999	59912675	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002339441	7.882643	9.6229669945	-1.74032	3.341102	NA	NR_039896	GI:337756844	MIR4742	DEFINITION Homo sapiens microRNA 4742 (MIR4742), microRNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002209438	6.459432	8.19721669 3	-1.73779	3.335227	NA	ENST00000443696	ENSG00000237328	RAI1-AS1	antisense	chr17	17662467	17674135	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000	8.4030	10.139551	-1.7365	3.3323	NA	ENST00000	ENSG	CTD-258	antisen	chr1	5567	556889	+	non-coding Gene from

205943	12	35	4	49		591665	00000267577	7H24.5	se	9	0306	08		Gencode(http://www.gencodegenes.org/)
RB_p_0002332 84	6.622052	8.3553510 96	-1.7333	3.324873	NA	ENST00000058956	ENSG00000267252	RP11-712C7.1	lincRNA	chr18	114900 72	11505058	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002046 97	7.2992 08	9.0279059 97	-1.7287	3.314286	NA	ENST00000056628 2	ENSG00000259935	RP11-519C12.1	sense_intronic	chr15	529408 30	52942063	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002029 27	12.033 94	13.761187 6	-1.7272 5	3.310957	NA	NR_002715	GI:84871994	RN7SL1	DEFINITION Homo sapiens RNA, 7SL, cytoplasmic 1 (RN7SL1), small cytoplasmic					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002029 27	12.033 94	13.761187 6	-1.7272 5	3.310957	NA			lncRNAdb:7SL_NR_002715.1 (Human)						non-coding Gene from lncRNAdb(www.lncrnadb.com)
RB_p_0002349 02	6.7142 46	8.4346282 28	-1.7203 8	3.295238	NA	ENST00000452809	ENSG00000235919	ASH1L-AS1	lincRNA	chr1	1.56E+08	1.56E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002391 28	9.8603 11	11.579433 8	-1.7191 2	3.292361	NA	NR_033931	GI:299890841	LOC152742	DEFINITION Homo sapiens uncharacterized LOC152742 (LOC152742), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p	6.3	8.066	-1.7	3.2	NA	ENST	EN	AC0	linc	ch	67	674	-	non-coding

_000 2188 71	487 28	0891 9	173 6	883 44		0000044745 3	SG 000 002 367 80	789 41.1	RN A	r2	35 18 01	051 24		Gene from Gencode(http:// www.gencodegenes.org/)
RB_p _000 2136 46	5.9 307 37	7.643 8561 9	-1.7 131 2	3.2 786 89	NA	ENST 0000 0415469	EN SG 000 002 294 04	RP1 1-12 4L5. 7	linc RN A	ch r1 0	86 03 97 35	860 544 15	+	non-coding Gene from Gencode(http:// www.gencodegenes.org/)
RB_p _000 2136 46	5.9 307 37	7.643 8561 9	-1.7 131 2	3.2 786 89	NA	TCON S_000 17711 TCON S_000 17848	XL OC _00 853 7	linc-FAM 190 B-1	lon g non -co din g RN A,in terg eni c	ch r1 0	86 03 97 35	860 544 15	+	non-coding Gene from JohnRinn lincRNA catalogue(http:// www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p _000 2186 85	12. 588 95	14.30 1853 39	-1.7 129	3.2 782 02	NA	NR_0 38868	GI: 336 391 132	LIN C00 615	DEFINITION Homo sapiens long intergenic non-protein coding RNA 615					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p _000 2278 25	8.4 757 33	10.18 7970 59	-1.7 122 4	3.2 766 85	NA	ENST 0000 0511775	EN SG 000 002 513 14	CTD -233 7A1 2.1	pro ces sed _tra nsc ript	ch r5	95 29 77 05	956 547 22	+	non-coding Gene from Gencode(http:// www.gencodegenes.org/)
RB_p _000 2156 67	7.8 041 31	9.514 7140 54	-1.7 105 8	3.2 729 31	NA	NR_0 37857	GI: 323 363 011	LOC 254 128	DEFINITION Homo sapiens uncharacterized LOC254128 (LOC254128), transcript					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p	9.0	10.76	-1.7	3.2	NA	NR_0	GI:	LIN	DEFINITION					non-coding Gene from

_000214806	55282	570049	1042	72556		26829	223555977	C00852	Homo sapiens long intergenic non-protein coding RNA 852			NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)		
RB_p_000199955	8.375039	10.074141446	-1.6991	3.246988	NA	ENST00000450727	ENSG00000167117	LINC00483	lincRNA	chr17	48834534	48844877	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000232427	8.17742	9.875749351	-1.6983	3.24525	NA	TCONS_00026557	XLOC_012878	linc-NETO1-4	long non-coding RNA,intergenic	chr18	70951945	70953165	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000234475	6.179909	7.876516947	-1.6966	3.241379	NA	ENST00000565823	ENSG00000260686	CTB-36H16.2	sense_overlapping	chr5	1.22E+08	1.22E+08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000226847	7.299208	8.992938336	-1.6937	3.234921	NA	HIT00038649 5.6	HIX0096130.6	Note=/BC108923	Alias=Non-protein coding transcript.	chr13	44774775	44775042	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_000220336	8.918863	10.612407 79	-1.6935 4	3.234504	NA	ENST00000534587	ENSG000002	RP11-21L19.1	antisense	chr11	14284391	14295237	-	non-coding Gene from Gencode(http://www.gencodeg

							54418							enes.org/)
RB_p_00020017878	10.26444	11.9575555 3	-1.6931 1	3.233537	NA	XR_108823	GI:310120105	NAG20	DEFINITION PREDICTED: Homo sapiens NAG20 (NAG20), misc_RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00021327 7	7.438792	9.12799432 1	-1.6892	3.224784	NA	ENST00000434306	ENSG00000234235	BOK-AS1	antisense	chr2	2.42E+08	2.42E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021976 6	12.19137	13.879966 08	-1.6886	3.223434	NA	HIT00019420 7.12	HIX0013223.17	Note=/M13192	Alias=Non-protein coding transcript.	chr16	72090058	72090111	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00021555 33	6.826548	8.513727596	-1.68718	3.220264	NA	ENST00000511592	ENSG00000250806	CTC-293G12.1	lincRNA	chr5	99989815	99993674	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021648 5	6.266787	7.951284715	-1.6845	3.214286	NA	ENST00000504034	ENSG00000250156	CTC-498M16.2	lincRNA	chr5	87729701	87794514	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00021648 5	6.266787	7.951284715	-1.6845	3.214286	NA	TCONS_00009719	XLOC_004917	linc-TMEM161B-3	long non-coding	chr5	87729701	87794514	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstit

								RNA,intergenic					ute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002029 43	7.495855	9.17617314 9	-1.68032	3.204986	NA	ENST00000562191	ENSG00000261292	RP11-389G6.3	sense_overlapping	chr3	97478366	97480374	+ non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002154 79	8.603626	10.28308835	-1.67946	3.203085	NA	ENST00000568776	ENSG00000259867	RP11-525K10.3	antisense	chr16	80189849	80597032	- non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002275 13	7.082149	8.761551232	-1.6794	3.202952	NA	TCONS_00016939 TCONS_00017012 TCONS_00017246 TCONS_00017247 TCONS_00017248	XLOC_008068	linc-FAM122C-2	long non-coding RNA,intergenic	chrX	1.34E+08	1.34E+08	+ non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002150 94	6.851749	8.529430554	-1.67768	3.199134	NA	NR_029689	GI:262205343	MIR153-2	DEFINITION Homo sapiens microRNA 153-2 (MIR153-2), microRNA.				non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_0002221 10	6.459432	8.136991112	-1.67756	3.198864	NA	ENST00000519700	ENSG000002	RP11-180K7.1	processed_tra	chr3	1.13E+08	1.13E+08	+ non-coding Gene from Gencode(http://www.gencodeg

							42770		nscript					enes.org/)
RB_p_00021411 3	8.197217	9.8726748	-1.6754	3.194208	NA	ENST00000441978	ENSG00000235488	JARID2-AS1	antisense	chr6	152480 45	152488 65	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00023377	10.31004	11.984774 46	-1.6747 3	3.192596	NA	TCONS_00000016 TCONS_00000078 TCONS_00000478 TCONS_00000479 TCONS_00001412 TCONS_00002304 TCONS_00002305	XLOC_000730	linc-PLA2G2C-1	long non-coding RNA,intergenic	chr1	206862 93	207577 27	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021310 3	9.40833	11.082315 39	-1.6739 9	3.190949	NA	HIT00032261.12	HIX0018085.19	Note=/X58758	Alias=Non-protein coding transcript.	chr14	230065 72	230066 25	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00020232	8.23362	9.905387005	-1.6717 7	3.186047	NA	NR_038232	GI:333440	LOC285889	DEFINITION Homo sapiens			non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nl		

04							444		uncharacterized LOC285889 (LOC285889), non-coding RNA.					m.nih.gov/RefSeq/)
RB_p_00023576 2	7.194757	8.862637358	-1.66788	3.177474	NA	TCONS_00000333 TCONS_00001200	XLOC_000462	linc-METTL13-2	long non-coding RNA,intergenic	chr1	1.72E+08	1.72E+08	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021358 3	6.546894	8.214319121	-1.66742	3.176471	NA	TCONS_00021967	XLOC_010568	linc-DCLK1-1	long non-coding RNA,intergenic	chr13	3673108 5	367359 99	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00020879 0	9.684749	11.35093918	-1.66619	3.173755	NA	ENST00000430181	ENSG00000235890	TSPEAR-AS1	antisense	chr21	4593055 68	459355 06	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00023114 2	9.844706	11.51088777	-1.66618	3.173736	NA	HIT00024421 0.12	HIX0027138.14	Note=/AJ008129	Alias=Non-protein coding transcri	chr17	4332319 5	433232 94	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)

									pt.					
RB_p_00020057	9.540128	11.2021238	-1.662	3.16454	NA	NR_036485	GI:302318964	SBF2-AS1	DEFINITION Homo sapiens SBF2 antisense RNA 1 (SBF2-AS1), non-coding RNA.					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_00022864	12.70196	14.363005	-1.66105	3.162464	NA	TCONS_00025131 TCONS_00025523	XLOC_012335	linc-CCDC40-1	long non-coding RNA,intergenic	chr17	77893155	77899334	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021169	7.894818	9.555068391	-1.66025	3.160714	NA	ENST00000591283	ENSG00000267506	RP11-13K12.1	lincRNA	chr17	75554223	75559325	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022664	6.228819	7.8887432 49	-1.65992	3.16	NA	HIT00025116 9.12	HIX0014476.18	Note=/AY243317	Alias=Non-protein coding transcript.	chr18	55721941	55833071	+	non-coding Gene from H-InvDB(http://h-invitational.jp/hinv/ahg-db/index.jsp)
RB_p_00023524	10.67154	12.3306368 2	-1.6591	3.158185	NA	ENST00000577140	ENSG00000263325	LA16c-325D7.1	antisense	chr16	29078988	29097227	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)

RB_p_000237289	11.18146	12.840187882	-1.65872	3.157374	NA	ENST00000517697	ENSG00000253549	RP11-317J10.2	antisense	chr8	86354079	86376562	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000208131	7.774787	9.427312844	-1.65253	3.143836	NA	ENST00000495696	ENSG00000187621	TCL6	lincRNA	chr14	96136778	96143473	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000230016	5.906891	7.5545888852	-1.6477	3.133333	NA	ENST00000571741	ENSG00000262692	CTD-3195I5.3	antisense	chr17	36249211	36257782	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000229102	11.50656	13.154026994	-1.64747	3.132841	NA	NR_028461	GI:258613859	ATXN3	DEFINITION Homo sapiens ataxin 3 (ATXN3), transcript variant p, non-coding					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000229914	10.12799	11.774992991	-1.647	3.131814	NA	ENST00000577781	ENSG00000263826	RP11-573D15.9	antisense	chr3	1.86E+08	1.87E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000216223	7.867279	9.511752654	-1.64447	3.126338	NA	ENST00000432976	ENSG00000237283	RP11-316I3.1	lincRNA	chr1	1.89E+08	1.89E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000216223	7.867279	9.511752654	-1.64447	3.126338	NA	TCONS_00000701	XLOC_001128	linc-PTGS2-1	long non-coding	chr1	1.89E+08	1.89E+08	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstit

									RNA,intergenic					ute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002350 71	9.3 117 48	10.95 5649 91	-1.6 439	3.1 250 98	NA	ENST 00000 57559 3	ENSG 0000 0026 1916	RP11-235E17.4	sense_intronic	chr17	35 05 05 4	350 556 6	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002199 38	9.0 606 96	10.70 3471 05	-1.6 427 8	3.1 226 59	NA	ENST 00000 51451 9	ENSG 0000 0024 9731	RP11-259O2.3	lincRNA	chr5	19 68 20 7	196 912 7	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002199 38	9.0 606 96	10.70 3471 05	-1.6 427 8	3.1 226 59	NA	TCONS_00009328	XLOC_00425 1	linc-C5orf38-6	long non-coding RNA,intergenic	chr5	19 68 20 7	196 912 7	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_0002097 77	6.2 946 21	7.936 6379 39	-1.6 420 2	3.1 210 19	NA	ENST 00000 45246 5	ENSG 0000 0023 6947	RP11-98G7.1	lincRNA	chr1	1. 56 E+ 08	1.5 6E +08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002000 92	6.4 262 65	8.063 3950 81	-1.6 371 3	3.1 104 65	NA	ENST 00000 45420 4	ENSG 0000 0022 5960	RP11-360A18.1	lincRNA	chr9	1. 23 E+ 08	1.2 3E +08	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_0002000 92	6.4 262 65	8.063 3950 81	-1.6 371 3	3.1 104 65	NA	TCONS_00015745	XLOC_00754	linc-CEP110-6	long non-co	chr9	1. 23 E+ 08	1.2 3E +08	+	non-coding Gene from JohnRinn lincRNA

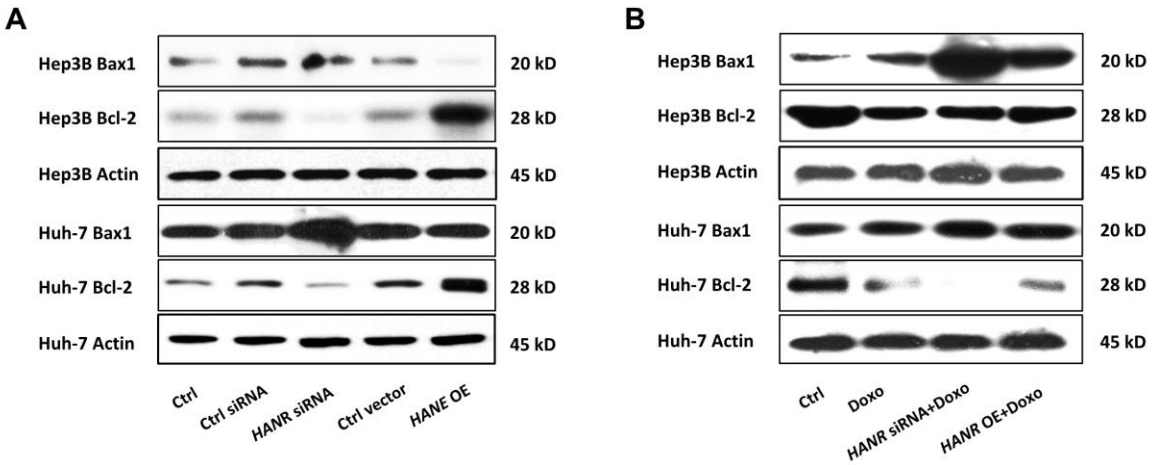
							5		ding RNA,intergenic					catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00021907 8	6.507795	8.14210705 7	-1.63431	3.104396	NA	ENST00000448859	ENSG00000232900	RP4-697P8.3	processed_transcript	chr20	10859580	10889920	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020885 1	5.629357	7.26209484 5	-1.63274	3.101011	NA	ENST00000568033	ENSG00000261480	RP11-578F21.6	lincRNA	chr15	28964522	28983577	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022853 5	7.271463	8.89935692 3	-1.62789	3.090615	NA	ENST00000551898	ENSG00000247774	PCED1B-AS1	lincRNA	chr12	47596983	47609983	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00020885 4	6.948367	8.57364718 7	-1.62528	3.08502	NA	TCONS_00014749 TCONS_00015293	XLOC_00683	linc-XKR9-3	long non-coding RNA,intergenic	chr8	71383355	71397892	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022919 8	8.758223	10.38100211	-1.62278	3.079677	NA	TCONS_00029068 TCONS_00029069 TCON	XLOC_013994	linc-S100B-2	long non-coding RNA,in	chr21	98263933	98277220	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_linc

						S_00029071 TCONS_00029072			tergenic					rnas/?q=lincRNA_catalog)
RB_p_000229267	8.807355	10.428883 55	-1.6215 3	3.077009	NA	NR_047598	GI:385137060	UTY	DEFINITION Homo sapiens ubiquitously transcribed tetratricopeptide repeat					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)
RB_p_000211010	6.108524	7.7279204 55	-1.6194	3.072464	NA	ENST00000432559	ENSG00000282829	RP11-219C24.10	antisense	chr1	13429633	13430107	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_000231021	7.271463	8.890264277	-1.6188	3.071197	NA	TCONS_00021720 TCONS_00021721 TCONS_00021722 TCONS_00022140	XLOC_010305	linc-SGCG-4	long non-coding RNA,intergenic	chr13	23502056	23509087	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000202371	10.02098	11.638096 47	-1.61712	3.067613	NA	TCONS_00028445 TCONS_00028446	XLOC_013805	linc-CYP24A1-4	long non-coding RNA,intergenic	chr20	54206129	54242676	-	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_000	8.6510	10.262682	-1.6116	3.0559	NA	NR_029714	GI:262	MIR320	DEFINITION Homo					non-coding Gene from NCBI Refseq

226593	52	14	3	7			205473	A	sapiens microRNA 320a (MIR320A), microRNA.					NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)	
RB_p_0002379 42	10.8498	12.460199 9	-1.6104	3.053373	NA	NR_002174	GI:146261999	CMAHP	DEFINITION Homo sapiens cytidine monophospho-N-acetylneuraminic acid					non-coding Gene from NCBI Refseq NR/XR(http://www.ncbi.nlm.nih.gov/RefSeq/)	
RB_p_0002082 01	9.04029	10.639792 89	-1.5995	3.030389	NA	ENST00000540994	ENSG00000256995	RP11-114G22.1	lincRNA	chr12	23174720	23207175	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)	
RB_p_0002346 23	7.554589	9.1497471 2	-1.5951 6	3.021277	NA	ENST00000416190	ENSG00000235166	RP5-1010E17.1	lincRNA	chr20	54039580	54084752	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)	
RB_p_0002346 23	7.554589	9.1497471 2	-1.5951 6	3.021277	NA	TCONS_00027956 TCONS_00027957	XLOC_013573	linc-MC3R-4	long non-coding RNA,intergenic	chr20	54039580	54084752	+	non-coding Gene from JohnRinn lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)	
RB_p_0002055 13	7.463524	9.0579917 23	-1.5944 7	3.01983	NA	ENST00000519454	ENSG00000170919	TPT1-AS1	lincRNA	chr13	45953418	45965292	+	non-coding Gene from Gencode(http://www.gencodegenes.org/)	
RB_p_0002389	11.37857	12.966775 8	-1.5882 1	3.006761	NA	TCONS_000	XLOC_00	linc-HIST3H	long non	chr1	2.29E+	2.29E+08	-	non-coding Gene from JohnRinn	

12						01854	1242	2A-2	-coding RNA,intergenic		08			lincRNA catalogue(http://www.broadinstitute.org/genome_bio/human_lincrnas/?q=lincRNA_catalog)
RB_p_00022514	11.65284	13.2401950 5	-1.5873 5	3.0049 69	NA	ENST00000531027	ENSG00000178814	OPLAH	processed_transcript	chr8	1.45E+08	1.45E+08	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)
RB_p_00022762 3	6.813781	8.3987436 92	-1.5849 6	3	NA	ENST00000415573	ENSG00000177133	RP1-163G9.1	processed_transcript	chr1	29778 52	29802 46	-	non-coding Gene from Gencode(http://www.gencodegenes.org/)

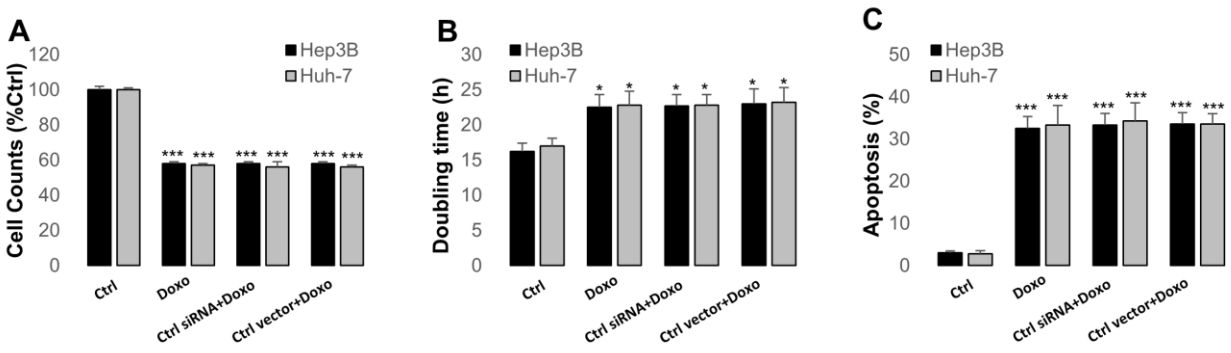
Supplementary figure 1



Supplementary Figure 1: Effect of *HANR* on basal and doxorubicin-induced hepatoma cell Bcl-2/Bax-1 protein expression *in vitro.* **(A)** Protein expression of Bax-1 and Bcl-2 in Hep3B and Huh-7 cells after transfection with *HANR* siRNA or OE plasmid. **(B)** Protein expression

of Bax-1 and Bcl-2 in Hep3B and Huh-7 cells after transfection with *HANR* siRNA or OE plasmid and with or without treatment with doxorubicin (Doxo).

Supplementary figure 2



Supplementary Figure 2: Control siRNA and over-expression vector of *HANR* has no influence in doxorubicin-induced hepatoma cell death**. (A)** Cell viability, **(B)** doubling time and **(C)** apoptotic ratio of Hep3B and Huh-7 cells, when treated with doxorubicin in the presence or absence of *HANR* control siRNA or control OE plasmid co-transfection. Data were presented in means ± SEM. "*" indicates comparison with control, *p < 0.05, **p < 0.01, ***p < 0.001.