

## MicroRNA-143 is a putative predictive factor for the response to fluoropyrimidine-based chemotherapy in patients with metastatic colorectal cancer

### Supplementary Material

**Supplemental Table 1: characteristics of patients and tumors in the Dicer IHC experiment**

Feature		All (n=243)	%
<b>Gender</b>	Male	155	64%
	Female	88	36%
<b>Age</b>	Median (range)	64 (36-83)	-
<b>Performance status</b>	PS0	166	68%
	PS1	67	28%
	PS2	10	4%
<b>LDH serum</b>	Normal	169	70%
	Abnormal	74	30%
<b>Previous adjuvant therapy</b>	Yes	39	16%
	No	204	84%
<b>Number of cycles of Capecitabine</b>	Median (range)	7 (1-53)	-
<b>Diagnosis of metastasis (12 months)</b>	Synchronous	139	57%
	Metachronous	104	43%
<b>Predominant localization of metastases</b>	Liver	170	70%
	Extra-hepatic	72	30%
	Unknown	1	0%
<b>Metastatic sites involved</b>			

	1	113	47%
	≥ 2	129	53%
<b>Localization of the primary tumor</b>	Unknown	1	0%
	Colon	161	66%
	Rectosigmoid	13	5%
	Rectum	67	28%
	Multiple tumor	2	1%
<b>Histology of the primary tumor</b>	Adenocarcinoma	204	84%
	Mucinous adenocarcinoma (>50% WHO)	17	7%
	Other	2	1%
	Unknown	20	8%
<b>Differentiation grade</b>	Good	10	4%
	Moderate	112	46%
	Poor	100	41%
	Undifferentiated	2	1%
	Unknown	19	8%
<b>T stage</b>	T1	1	0%
	T2	14	6%
	T3	181	74%
	T4	42	17%
	Unknown	5	2%
<b>N stage</b>	N0	71	29%
	N1	86	35%
	N2	79	33%
	Unknown	7	3%
<b>MSI status</b>	dMMR	4	2%
	pMMR	212	87%
	Unknown	27	11%



**Supplemental Table 2: characteristics of patients and tumors in the miRNA expression analysis**

Feature	miR-143 expression in primary tumor			Statistical test	p-Value	
	All (n=55)	Low/1 (n=27)	High/2 (n=28)			
<b>Gender</b>	Male	38	20	18	Fisher's Exact	0.562
	Female	17	7	10		
<b>Age</b>	Median (range)	65 (34-79)	69 (45-79)	64 (34-75)	Kruskal-Wallis	0.007
	<b>Performance status</b>	PS0	55	27		
	PS1	0	0	0		
	PS2	0	0	0		
<b>LDH serum</b>	Normal	55	27	28	n.d.	n.d.
	Abnormal	0	0	0		
<b>Previous adjuvant therapy</b>	Yes	0	0	0	n.d.	n.d.
	No	55	27	28		
<b>Number of cycles of Capecitabine</b>	Median (range)	9 (3-32)	9 (3-32)	6 (3-32)	Kruskal-Wallis	0.012
<b>Diagnosis of metastasis (12 months)</b>	Synchronous	32	17	15	Fisher's Exact	0.588
	Metachronous	23	10	13		
<b>Predominant localization of metastases</b>	Liver	38	19	19	Fisher's Exact	1.000
	Extra-hepatic	15	7	8		
	Unknown	2	1	1		
<b>Metastatic sites involved</b>	1	23	10	13	Fisher's Exact	0.588
	≥ 2	32	17	15		
	Unknown	0	0	0		
<b>Localization of the primary tumor</b>	Colon	47	22	25	Fisher's Exact	0.469

<b>Histology of the primary tumor</b>	Rectosigmoid	8	5	3	Fisher's Exact	1.000
	Rectum	0	0	0		
	Multiple tumor	0	0	0		
	Adenocarcinoma	41	22	22		
<b>Differentiation grade</b>	Mucinous adenocarcinoma (>50% WHO)	7	3	4	Fisher's Exact	0.882
	Other	0	0	0		
	Unknown	4	2	2		
	Good	1	1	0		
	Moderate	32	15	17		
<b>T stage</b>	Poor	18	9	9	Fisher's Exact	0.866
	Undifferentiated	0	0	0		
	Unknown	4	2	2		
	T1	0	0	0		
	T2	2	1	1		
	T3	40	18	22		
<b>N stage</b>	T4	11	6	5	Fisher's Exact	0.279
	Unknown	2	2	0		
	N0	24	11	13		
	N1	19	7	12		
	N2	10	7	3		
<b>MSI status</b>	Unknown	2	2	0	Fisher's Exact	1.000
	dMMR	2	1	1		
	pMMR	46	21	25		
	Unknown	7	5	2		

n.d. = not done

**Supplemental Table 3: characteristics of patients and tumors in the FXYD3 IHC experiment**

Feature	FXYD3 staining in primary tumor		Statistical test	p-Value	
	Weak/1 (n=32)	Strong/2 (n=211)			
<b>Gender</b>	Male	17	138	Fisher's Exact	0.236
	Female	15	73		
<b>Age</b>	Median (range)	65 (40-77)	64 (36-83)	Kruskal-Wallis	0.677
<b>Performance status</b>	PS0	22	144	Fisher's Exact	0.774
	PS1	8	59		
	PS2	2	8		
<b>LDH serum</b>	Normal	18	151	Fisher's Exact	0.0988
	Abnormal	14	60		
<b>Previous adjuvant therapy</b>	Yes	8	31	Fisher's Exact	0.1921
	No	24	180		
<b>Number of cycles of Capecitabine</b>	Median (range)	6 (1-27)	7 (1-53)	Kruskal-Wallis	0.169
<b>Diagnosis of metastasis (12 months)</b>	Synchronous	17	122	Fisher's Exact	0.702
	Metachronous	15	89		
<b>Predominant localization of metastases</b>	Liver	18	152	Fisher's Exact	0.095
	Extra-hepatic	14	58		
	Unknown	0	1		
<b>Metastatic sites involved</b>	1	16	97	Fisher's Exact	0.708
	≥ 2	16	113		
	Unknown	0	1		
<b>Localization of the primary tumor</b>				Fisher's Exact	0.504

	Colon	24	137		
	Rectosigmoid	0	13		
	Rectum	8	59		
	Multiple tumor	0	2		
<b>Histology of the primary tumor</b>				Fisher's Exact	0.021
	Adenocarcinoma	25	179		
	Mucinous adenocarcinoma (>50% WHO)	2	15		
	Other	2	0		
	Unknown	3	17		
<b>Differentiation grade</b>				Fisher's Exact	0.024
	Good	0	10		
	Moderate	13	99		
	Poor	14	86		
	Undifferentiated	2	0		
	Unknown	3	16		
<b>T stage</b>				Fisher's Exact	0.193
	T1	0	1		
	T2	4	10		
	T3	20	161		
	T4	7	35		
	Unknown	1	4		
<b>N stage</b>				Fisher's Exact	0.089
	N0	11	60		
	N1	6	80		
	N2	14	65		
	Unknown	1	6		
<b>MSI status</b>				Fisher's Exact	1.000
	dMMR	0	4		
	pMMR	29	183		
	Unknown	3	24		

**Supplemental Table 4: Taqman microRNA assays**

<b>Assay Name</b>	<b>Assay ID</b>	<b>Target Sequence</b>	<b>Reference</b>
miR-16	391	UAGCAGCACGUAAAUAUUGGCG	[1]
miR-17	2308	CAAAGUGCUUACAGUGCAGGUAG	[2]
miR-18a	2422	UAAGGUGCAUCUAGUGCAGAUAG	[2]
miR-19a	395	UGUGCAAUCUAUGCAAACUGA	[2]
miR-19b	396	UGUGCAAUCCAUGCAAACUGA	[2]
miR-20a	580	UAAAGUGCUUAUAGUGCAGGUAG	[2]; [3]
miR-21	397	UAGCUUAUCAGACUGAUGUUGA	[4]; [5]; [6]
miR-24	402	UGGCUCAGUUCAGCAGGAACAG	[7]; [8]
miR-26b	407	UUCAAGUAAUUCAGGAUAGGU	[9]; [10]
miR-31	2279	AGGCAAGAUGCUGGCAUAGCU	[11]
MiR-34a	426	UGGCAGUGUCUAGCUGGUUGU	[12]
miR-92a	431	UAUUGCACUUGUCCCGGCCUGU	[13]; [14]
MiR-93	1090	CAAAGUGCUGUUCGUGCAGGUAG	[14]
miR-103	439	AGCAGCAUUGUACAGGGCUAUGA	[15]; [16]
MiR-125b	449	UCCCUGAGACCCUAACUUGUGA	[17]



MiR-137	1129	UUAUUGCUUAAGAAUACGCGUAG	[17]
MiR-140	1187	CAGUGGUUUUACCCUAUGGUAG	[18]
MiR-143	2249	UGAGAUGAAGCACUGUAGCUC	[19]
MiR-145	2278	GUCCAGUUUUCCCAGGAAUCCCU	[20]
MiR-148a	470	UCAGUGCACUACAGAACUUUGU	[21]; [22]
MiR-191	2299	CAACGGAAUCCCAAAGCAGCUG	[14]
MiR-192	491	CUGACCUAUGAAUUGACAGCC	[23]
MiR-215	518	AUGACCUAUGAAUUGACAGAC	[23]
MiR-222	2276	AGCUACAUCUGGCUACUGGGU	[14]
let-7a	377	UGAGGUAGUAGGUUGUAUAGUU	[24, 25]
let-7g	2282	UGAGGUAGUAGUUUGUACAGUU	[26]

#### References for Supplemental Table 4

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**Supplemental Table 5: putative target genes for miR-143 identified with Microcosm**

#	GENE SYMBOL	TRANSCRIPT_ID	SCORE	PVALUE_OG
1	SPINT3	ENST00000217428	203,468	7.25E+02
2	K0256	ENST00000380927	194,323	4.02E+00
3	C7orf34	ENST00000297830	194,323	1.85E+03
4	TMEM16G	ENST00000274979	191,351	5.78E+02
5	CAB39L	ENST00000347776	190,894	8.95E+01
6	GRIK3	ENST00000373091	189,835	2.92E+03
7	C10orf99	ENST00000372126	187,897	2.83E+01
8	HERC5	ENST00000264350	186,322	4.18E+03
9	GRIPAP1	ENST00000015926	186,074	3.15E+03
10	ADAMTSL1	ENST00000327883	185,179	4.70E+03
11	EME1	ENST00000338165	185,056	5.67E+02
12	BRD2	ENST00000374831	184,548	5.01E+03
13	FMR1NB	ENST00000370465	184,036	8.95E+01
14	IFNWP18	ENST00000239347	184,036	5.28E+03
15	KIF9	ENST00000335044	184,036	5.28E+03
16	EMID1	ENST00000334018	183,845	3.65E+03
17	Q6H1K9	ENST00000376242	183,812	1.38E+02
18	NXF1	ENST00000294172	183,757	5.43E+03
19	GNAS	ENST00000371081	181,974	6.51E+03
20	NP_071353.4	ENST00000184956	181,856	5.47E+02
21	ECSIT	ENST00000270517	181,749	3.94E+01
22	HMBS	ENST00000278715	181,749	7.41E+01
23	PLA2G1B	ENST00000308366	181,749	2.10E+03
24	DEFA6	ENST00000382702	181,749	5.73E+03
25	DEFA6	ENST00000297436	181,749	6.66E+03
26	C7orf28B	ENST00000316731	181,749	6.66E+03
27	C7orf28A	ENST00000325974	181,749	6.66E+03
28	SMNDC1	ENST00000369592	181,749	6.66E+03
29	MAPK13	ENST00000373766	181,109	7.11E+03
30	ADFP	ENST00000276914	180,917	5.35E+02
31	MAPK7	ENST00000299612	180,606	1.51E+00

32	CIDEA	ENST00000342845	180,606	1.08E+03
33	MRO	ENST00000256425	180,606	3.61E+03
34	NP_079189.3	ENST00000340646	180,606	7.48E+03
35	DDC	ENST00000380984	180,606	7.48E+03
36	TIGD5	ENST00000321385	180,364	1.82E+03
37	SPINT3	ENST00000372673	180,011	7.94E+03
38	C1orf49	ENST00000319416	179,463	3.45E+01
39	ZNF570	ENST00000330173	179,463	1.11E+03
40	TMEM60	ENST00000257663	179,463	1.31E+03
41	UBE2T	ENST00000367274	179,463	6.48E+03
42	TFF3	ENST00000291525	179,463	8.40E+03
43	BAG3	ENST00000369085	178,983	1.90E+03
44	CIR	ENST00000342016	178,892	8.90E+03
45	EIF4ENIF1	ENST00000330125	178,862	7.83E+03
46	BCAP31	ENST00000345046	178,596	9.17E+03
47	GNAS	ENST00000371099	178,234	9.51E+03
48	PLA1A	ENST00000273371	178,149	2.30E+02
49	Q5JXA8	ENST00000381630	178,068	9.68E+03
50	SLC17A1	ENST00000377886	177,898	9.84E+03
51	TMEM121	ENST00000330164	177,787	1.72E+00
52	KLK8	ENST00000376832	177,706	1.00E+04
53	GZMK	ENST00000381400	177,666	1.01E+04
54	WDR69	ENST00000309931	177,335	1.04E+04
55	PDLIM5	ENST00000359265	177,233	1.05E+04
56	SNIP	ENST00000264659	177,177	8.62E+02
57	USMG5P1	ENST00000373490	177,177	1.06E+04
58	SMC2	ENST00000374787	177,168	3.49E+02
59	AADAC	ENST00000232892	176,777	5.16E+02
60	CLRN3	ENST00000368671	176,646	5.64E+03
61	Q8N793	ENST00000359068	176,342	1.15E+04
62	Q8N793	ENST00000355435	176,306	1.16E+04
63	Q6ZU57	ENST00000360524	176,297	1.16E+04
64	PRPF19	ENST00000227524	176,208	2.46E+01

65	WNK4	ENST00000246914	176,075	7.06E+03
66	GCS1	ENST00000233616	176,034	1.19E+02
67	IAG2	ENST00000373338	176,034	7.06E+02
68	C5orf14	ENST00000358387	176,034	1.29E+03
69	SEC61G	ENST00000352861	176,034	8.32E+03
70	RQCD1	ENST00000295701	176,034	1.19E+04
71	DEFA3	ENST00000327857	176,034	1.19E+04
72	KRT28	ENST00000377794	176,034	1.19E+04
73	DEFA3	ENST00000382679	176,034	1.19E+04
74	AMICA1	ENST00000356289	175,854	1.21E+04
75	AMICA1	ENST00000292067	175,691	1.23E+04
76	RPS27	ENST00000368565	175,398	1.27E+04
77	CCDC94	ENST00000262962	175,348	6.04E+00
78	CAB39L	ENST00000347776	174,891	8.95E+01
79	FMR1NB	ENST00000370465	174,891	8.95E+01
80	KIF9	ENST00000265529	174,891	2.18E+02
81	SCN8A	ENST00000357961	174,891	1.33E+04
82	EDF1	ENST00000371649	174,853	1.34E+04
83	HLA-DRB5	ENST00000374975	174,793	1.35E+04
84	RNF170	ENST00000330830	174,791	4.36E+02
85	IFNWP18	ENST00000259555	174,758	1.39E+03
86	UBE2E4P	ENST00000305934	174,696	8.32E+03
87	SFRS11	ENST00000370951	174,466	1.39E+04
88	IFNWP18	ENST00000380220	174,431	1.40E+04
89	IFNG	ENST00000229135	174,201	3.83E+03
90	LHX2	ENST00000373615	174,193	1.54E+03
91	DHX8	ENST00000262415	174,167	6.44E+03
92	NP_001010859.1	ENST00000382097	174,081	1.45E+04
93	PTPRD	ENST00000356435	173,887	9.64E+03
94	TMEM126B	ENST00000358867	173,748	3.45E+01
95	ABHD14A	ENST00000360889	173,748	3.34E+02
96	SFRS16	ENST00000221455	173,748	3.32E+03
97	HEXIM2	ENST00000307275	173,748	5.94E+03

98	TUBG2	ENST00000251412	173,748	1.12E+04
99	CSH2	ENST00000345366	173,748	1.50E+04
100	C9orf163	ENST00000354376	173,725	1.50E+04
101	IFNA16	ENST00000380216	173,672	1.51E+04
102	RFPL3	ENST00000382088	173,672	1.51E+04
103	ANKRD46	ENST00000358990	173,309	1.11E+02
104	ITGB3BP	ENST00000283568	172,999	1.62E+04
105	KIAA0372	ENST00000380021	172,996	1.19E+04
106	ZCCHC7	ENST00000322831	172,888	1.63E+04
107	C7orf38	ENST00000333062	172,873	1.64E+04
108	SORCS1	ENST00000369698	172,771	1.65E+04
109	Q6H1K9	ENST00000376242	172,739	1.38E+02
110	IL1F9	ENST00000259205	172,612	8.40E+03
111	CCDC58	ENST00000291458	172,605	1.05E+02
112	BPIL1	ENST00000170150	172,605	4.17E+03
113	NPPA	ENST00000376480	172,605	6.84E+03
114	NUP88	ENST00000381211	172,605	8.25E+03
115	PTPN23	ENST00000265562	172,605	1.68E+04
116	C1orf53	ENST00000367393	172,605	1.68E+04
117	NPPA	ENST00000376476	172,605	1.68E+04
118	PC	ENST00000355677	172,367	4.51E+01
119	ZMYND19	ENST00000298585	172,357	5.45E+03
120	ASXL1	ENST00000375689	172,315	2.13E+03
121	OR7A17	ENST00000327462	172,169	1.76E+04
122	PARP6	ENST00000336471	172,116	1.77E+04
123	LENEP	ENST00000368427	171,936	1.52E+04
124	RASEF	ENST00000340717	171,921	1.80E+04
125	VHL	ENST00000256474	171,865	1.81E+04
126	MFSD11	ENST00000336509	171,861	1.11E+04
127	CLDN10	ENST00000376855	171,751	1.83E+04
128	CTRC	ENST00000375943	171,554	1.87E+04
129	KIF4A	ENST00000374403	171,553	1.87E+04
130	CCBL1	ENST00000302586	171,471	3.67E+03

131	ZUBR1	ENST00000375224	171,463	1.89E+04
132	ATP12A	ENST00000218548	171,462	2.71E+02
133	TMEM134	ENST00000308022	171,462	1.80E+03
134	ARHGAP15	ENST00000295095	171,462	2.08E+03
135	NP_955369.1	ENST00000333449	171,462	4.49E+03
136	SCEL	ENST00000349847	171,462	8.22E+03
137	CRYM	ENST00000219599	171,462	1.89E+04
138	GNL3	ENST00000354540	171,462	1.89E+04
139	ENSA	ENST00000362052	171,462	1.89E+04
140	ARPC5	ENST00000367534	171,462	1.89E+04
141	PRPS1	ENST00000372418	171,462	1.89E+04
142	SCEL	ENST00000377246	171,462	1.89E+04
143	SH3BGR	ENST00000380631	171,462	1.89E+04
144	SH3BGR	ENST00000380634	171,462	1.89E+04
145	ATP12A	ENST00000381946	171,462	1.89E+04
146	C8orf45	ENST00000313934	171,266	1.92E+04
147	CD79A	ENST00000221972	171,006	1.91E+04
148	C20orf112	ENST00000375675	171,005	1.97E+04
149	TXNDC6	ENST00000341790	170,815	2.01E+04
150	LMO4	ENST00000370542	170,811	2.01E+04
151	HOXA5	ENST00000222726	170,795	1.04E+03
152	Q96HM8	ENST00000355278	170,772	2.02E+04
153	NP_001067.2	ENST00000338206	170,654	2.04E+04
154	NM_203423	ENST00000318930	170,572	1.05E+03
155	NM_203423	ENST00000382541	170,511	1.06E+03
156	NP_955373.2	ENST00000328759	170,474	2.03E+04
157	Q5JPQ1	ENST00000370707	170,455	2.09E+04
158	LAD1	ENST00000367313	170,358	8.22E+03
159	C15orf23	ENST00000249776	170,319	2.05E+03
160	C6orf15	ENST00000259870	170,319	2.11E+04
161	GEMIN8	ENST00000332885	170,319	2.11E+04
162	GABBR1	ENST00000376998	170,319	2.11E+04
163	MLLT10	ENST00000377100	170,319	2.11E+04



164	RB1	ENST00000378437	170,319	2.11E+04
165	GEMIN8	ENST00000380523	170,319	2.11E+04
166	STIP1	ENST00000358794	170,242	2.13E+04
167	MYO3A	ENST00000265944	170,172	1.11E+03
168	PIK3CA	ENST00000263967	170,146	2.12E+03
169	DTNB	ENST00000288642	170,146	2.15E+04
170	PRUNE2	ENST00000376710	170,114	2.16E+04
171	STIP1	ENST00000305218	170,103	2.16E+04
172	HS2ST1	ENST00000370551	170,046	2.17E+04
173	C14orf8	ENST00000321760	169,999	7.60E+02
174	TINAG	ENST00000370864	169,982	2.19E+04
175	FRY	ENST00000380235	169,965	2.19E+04
176	COX7A2L	ENST00000234301	169,844	2.22E+04
177	C1orf19	ENST00000367517	169,732	2.24E+04
178	FXD3	ENST00000344013	169,403	1.97E+02
179	MLXIPL	ENST00000354613	169,395	2.32E+04
180	KLHL6	ENST00000341319	169,305	2.34E+04
181	PARC	ENST00000354351	169,185	2.37E+04
182	CDKL3	ENST00000265334	169,176	4.94E+02
183	UTP18	ENST00000225298	169,176	5.03E+03
184	MYL3	ENST00000292327	169,176	8.60E+03
185	TTC12	ENST00000314756	169,176	8.66E+03
186	NP_071395.1	ENST00000310686	169,176	2.37E+04
187	KIAA0748	ENST00000316577	169,176	2.37E+04
188	C18orf20	ENST00000323355	169,176	2.37E+04
189	PROZ	ENST00000342783	169,176	2.37E+04
190	STK16	ENST00000358905	169,176	2.37E+04
191	SYTL3	ENST00000360448	169,176	2.37E+04
192	MOSC2	ENST00000366914	169,176	2.37E+04
193	PRIM2A	ENST00000370687	169,176	2.37E+04
194	PROZ	ENST00000375547	169,176	2.37E+04
195	USE1	ENST00000379776	169,176	2.37E+04
196	PLAUR	ENST00000339082	169,156	2.38E+04

197	hCG_1790474	ENST00000361429	169,062	2.38E+04
198	DYRK1B	ENST00000323039	168,983	2.42E+04
199	HLA-DRB1	ENST00000360004	168,952	2.42E+04
200	OR7C1	ENST00000248073	168,806	2.46E+04
201	BAGE	ENST00000335369	168,806	2.46E+04
202	CD33	ENST00000262262	168,657	1.11E+04
203	Q96HG1	ENST00000330288	168,564	2.52E+04
204	KIR2DL1	ENST00000360233	168,468	2.54E+04
205	MYBL2	ENST00000217026	168,451	2.85E+03
206	ABCA4	ENST00000361520	168,357	3.12E+02
207	HVCN1	ENST00000356742	168,317	7.57E+03
208	ABCA4	ENST00000370225	168,216	2.61E+04
209	SMC2	ENST00000374787	168,141	3.49E+02
210	HIST1H1E	ENST00000377787	168,125	2.63E+04
211	TMEM126B	ENST00000358867	168,033	3.45E+01
212	KIAA0274	ENST00000230124	168,033	1.37E+02
213	Q6ZP14	ENST00000378347	168,033	8.85E+02
214	GRTP1	ENST00000375431	168,033	2.12E+03
215	SLC22A16	ENST00000368919	168,033	3.82E+03
216	TAL2	ENST00000374699	168,033	4.01E+03
217	MRPS24	ENST00000317534	168,033	5.75E+03
218	ALS2CR11	ENST00000286195	168,033	6.55E+03
219	GPR18	ENST00000340807	168,033	9.23E+03
220	DPM1	ENST00000371584	168,033	1.10E+04
221	SLC22A16	ENST00000330550	168,033	2.66E+04
222	ZNF394	ENST00000337673	168,033	2.66E+04
223	VPS72	ENST00000354473	168,033	2.66E+04
224	ZMYM2	ENST00000382881	168,033	2.66E+04
225	SFRS11	ENST00000370949	168,007	2.66E+04
226	SKIL	ENST00000259119	167,996	2.67E+04
227	MAGEA9B	ENST00000243314	167,981	2.67E+04
228	MAGEA9	ENST00000298974	167,981	2.67E+04
229	PRPF18	ENST00000298451	167,965	2.68E+04

230	M6PR	ENST00000000412	167,913	3.33E+03
231	TDO2	ENST00000281525	167,848	1.21E+02
232	KRT2	ENST00000309680	167,834	2.71E+04
233	CDC6	ENST00000209728	167,824	3.48E+01
234	RAB9A	ENST00000243325	167,808	2.72E+04
235	RABL4	ENST00000381855	167,801	3.53E+02
236	Q8NFD4	ENST00000377519	167,801	2.72E+04
237	ATP10A	ENST00000389967	167,801	2.72E+04
238	PRTG	ENST00000389286	167,732	1.23E+04
239	PSG2	ENST00000378039	167,639	2.76E+04
240	PLAU	ENST00000372762	167,599	2.77E+04
241	EAPP	ENST00000250454	167,448	9.62E+01
242	RMND1	ENST00000367299	167,423	2.82E+04
243	XR_017872.1	ENST00000331301	167,366	2.84E+04
244	NP_775898.2	ENST00000323854	167,357	2.84E+04
245	C1orf80	ENST00000334051	167,316	2.85E+04
246	SLC22A7	ENST00000372585	167,261	2.57E+03
247	CRELD1	ENST00000326434	167,185	2.89E+04
248	DLEU1	ENST00000378180	167,135	2.91E+04
249	C19orf10	ENST00000262947	167,104	1.55E+03
250	CDC20B	ENST00000331730	167,101	2.92E+04
251	FBXO16	ENST00000380254	167,101	2.92E+04
252	FGD6	ENST00000343958	167,097	2.92E+04
253	C6orf130	ENST00000244558	167,027	8.87E+03
254	TAOK2	ENST00000308893	166,998	1.53E+04
255	C6orf130	ENST00000373154	166,994	2.95E+04
256	IGLV1-44	ENST00000390297	166,948	2.96E+04
257	NP_060761.2	ENST00000371218	166,889	7.00E+01
258	CASP8	ENST00000343290	166,889	1.30E+02
259	CASP8	ENST00000343290	166,889	1.30E+02
260	ZNF277P	ENST00000361822	166,889	2.09E+02
261	NFATC2	ENST00000371567	166,889	3.66E+02
262	MRPS33	ENST00000324787	166,889	4.75E+02

263	RNF175	ENST00000274068	166,889	3.05E+03
264	SHC3	ENST00000375831	166,889	4.17E+03
265	FKBP3	ENST00000216330	166,889	4.40E+03
266	MOGAT3	ENST00000223114	166,889	2.98E+04
267	ACAT1	ENST00000265838	166,889	2.98E+04
268	S100A11	ENST00000271638	166,889	2.98E+04
269	XR_017721.1	ENST00000283760	166,889	2.98E+04
270	NFIL3	ENST00000297689	166,889	2.98E+04
271	NP_060761.2	ENST00000303721	166,889	2.98E+04
272	LOC653075	ENST00000326816	166,889	2.98E+04
273	HSD17B7	ENST00000334622	166,889	2.98E+04
274	LOC653720	ENST00000340249	166,889	2.98E+04
275	LOC653125	ENST00000342893	166,889	2.98E+04
276	XR_017846.1	ENST00000360934	166,889	2.98E+04
277	NP_060761.2	ENST00000371212	166,889	2.98E+04
278	NFIL3	ENST00000375724	166,826	2.58E+03
279	DOCK2	ENST00000343291	166,826	3.00E+04
280	CALN1	ENST00000329008	166,796	4.08E+03
281	O52L2	ENST00000316540	166,796	3.01E+04
282	Q96J93	ENST00000360562	166,796	3.01E+04
283	TXNDC8	ENST00000374507	166,796	3.01E+04
284	Q53S57	ENST00000377435	166,796	3.01E+04
285	UBAC2	ENST00000376429	166,687	3.04E+04
286	RPS24	ENST00000372355	166,682	3.04E+04
287	CLGN	ENST00000325617	166,542	1.31E+03
288	KRT76	ENST00000332411	166,541	3.08E+04
289	SBDS	ENST00000246868	166,513	8.61E+03
290	CCL7	ENST00000378569	166,502	3.09E+04
291	KLK5	ENST00000336334	166,451	1.60E+03
292	Q8WYN8	ENST00000344561	166,422	3.12E+04
293	SIRT2	ENST00000249396	166,393	3.04E+04
294	ISLR2	ENST00000360956	166,393	3.13E+04
295	HIST1H2BC	ENST00000314332	166,331	3.15E+04

296	TCEAL4	ENST00000372629	166,281	3.16E+04
297	CCDC114	ENST00000355682	166,266	1.51E+03
298	SLC25A15	ENST00000379523	166,256	3.17E+04
299	TESC	ENST00000335209	166,246	2.71E+03
300	C6orf65	ENST00000370748	166,197	3.19E+04
301	NP_694583.1	ENST00000295226	166,193	3.19E+04
302	CDK2AP1	ENST00000261692	166,112	2.77E+03
303	ELMOD1	ENST00000265840	166,102	2.71E+02
304	NEDD9	ENST00000379433	166,055	3.23E+04
305	DEGS1	ENST00000323699	165,979	6.17E+01
306	TRDC	ENST00000390477	165,925	3.28E+04
307	GLO1	ENST00000373365	165,899	6.21E+02
308	FLOT1	ENST00000376385	165,838	3.30E+04
309	Q6ZSQ7	ENST00000330476	165,791	3.95E+03
310	TTY11	ENST00000253470	165,791	3.32E+04
311	OR2T29	ENST00000328570	165,791	3.32E+04
312	HHLA2	ENST00000357759	165,791	3.32E+04
313	OR2T5	ENST00000366473	165,791	3.32E+04
314	PFKP	ENST00000381188	165,791	3.32E+04
315	HPS4	ENST00000312736	165,764	3.33E+04
316	HNRPR	ENST00000374612	165,754	4.32E+03
317	ADFP	ENST00000276914	165,751	5.35E+02
318	YIF1B	ENST00000339413	165,746	6.38E+01
319	GLI3	ENST00000265526	165,746	5.09E+02
320	COL5A1	ENST00000371815	165,746	7.06E+02
321	RASEF	ENST00000376447	165,746	7.06E+02
322	RNF6	ENST00000339626	165,746	8.85E+02
323	ALG5	ENST00000239891	165,746	5.08E+03
324	DGKA	ENST00000331886	165,746	1.05E+04
325	FBXW12	ENST00000296438	165,746	2.66E+04
326	MRPL36	ENST00000382647	165,746	2.97E+04
327	KYNU	ENST00000264170	165,746	3.33E+04
328	AZGP1	ENST00000292401	165,746	3.33E+04

329	NP_001017987.1	ENST00000292586	165,746	3.33E+04
330	MLLT10	ENST00000307729	165,746	3.33E+04
331	Q96FU4	ENST00000328202	165,746	3.33E+04
332	SNRPB	ENST00000336808	165,746	3.33E+04
333	RUFY2	ENST00000342616	165,746	3.33E+04
334	OMA1	ENST00000371226	165,746	3.33E+04
335	CTNNA3	ENST00000373735	165,746	3.33E+04
336	HES2	ENST00000377836	165,746	3.33E+04
337	A4D0Y5	ENST00000378768	165,746	3.33E+04
338	IL11RA	ENST00000378817	165,746	3.33E+04
339	SNRPB	ENST00000381342	165,746	3.33E+04
340	ARD1B	ENST00000286794	165,727	1.77E+04
341	HNRPR	ENST00000374614	165,701	4.36E+03
342	HNRPR	ENST00000374616	165,675	4.39E+03
343	VPS72	ENST00000368892	165,662	7.98E+03
344	CYP4Z1	ENST00000334194	165,645	3.37E+04
345	RAPGEF4	ENST00000264111	165,623	1.18E+03
346	C12orf52	ENST00000299731	165,623	3.38E+04
347	TM7SF4	ENST00000297581	165,604	5.29E+03
348	KIR2DL1	ENST00000339924	165,544	3.40E+04
349	PPP2R2A	ENST00000315985	165,505	3.42E+04
350	RPGR	ENST00000378505	165,501	1.17E+03
351	TMEM77	ENST00000369761	165,419	3.44E+04
352	RIC8A	ENST00000325207	165,416	3.45E+04
353	RXFP2	ENST00000298386	165,382	6.33E+01
354	CYP2C19	ENST00000371321	165,336	3.47E+04
355	C9orf86	ENST00000290079	165,319	3.48E+04
356	NCL	ENST00000356936	165,315	3.48E+04
357	NXT1	ENST00000254998	165,311	3.48E+04
358	CDC27	ENST00000066544	165,285	2.08E+01
359	RIC8A	ENST00000382752	165,259	3.50E+04
360	NCL	ENST00000322723	165,215	2.92E+03
361	ZSCAN2	ENST00000334141	165,188	3.52E+04

362	Q8N1W0	ENST00000325649	165,156	3.54E+04
363	TACR1	ENST00000305249	165,148	9.81E+01
364	TMEM77	ENST00000286692	165,146	3.54E+04
365	HIST1H2AL	ENST00000377352	165,088	3.56E+04
366	Q9H1T4	ENST00000379864	165,039	3.56E+04
367	CYP1A2	ENST00000343932	165,035	1.67E+03
368	HTR3A	ENST00000355556	165,017	3.58E+04
369	CCDC110	ENST00000307588	164,887	3.63E+04
370	IGFBP3	ENST00000381086	164,824	3.65E+04
371	Q6ZWH7	ENST00000374795	164,819	3.65E+04
372	GSN	ENST00000373807	164,808	3.66E+04
373	Q8N287	ENST00000355927	164,789	3.67E+04
374	GABARAPL3	ENST00000312365	164,786	8.48E+03
375	Q4G0P5	ENST00000321991	164,786	3.67E+04
376	FKHL18	ENST00000322577	164,786	3.67E+04
377	C21orf77	ENST00000334165	164,786	3.67E+04
378	Q5JXA8	ENST00000381628	164,786	3.67E+04
379	SH3BGR	ENST00000333634	164,769	4.64E+03
380	ZNF514	ENST00000295208	164,766	9.85E+03
381	P2RY4	ENST00000374519	164,757	1.74E+03
382	CKM	ENST00000221476	164,755	3.68E+04
383	PHACTR1	ENST00000379348	164,753	3.68E+04
384	C14orf103	ENST00000261834	164,655	1.19E+02
385	HSD17B4	ENST00000256216	164,645	1.45E+04
386	Q2TVT4	ENST00000377517	164,612	3.73E+04
387	Q2TVT4	ENST00000377549	164,612	3.73E+04
388	Q2TVT4	ENST00000377550	164,612	3.73E+04
389	SARS	ENST00000369923	164,603	3.68E+00
390	WDR16	ENST00000299764	164,603	4.79E+02
391	DCPS	ENST00000263579	164,603	4.93E+02
392	COL5A1	ENST00000371815	164,603	7.06E+02
393	IAG2	ENST00000373338	164,603	7.06E+02
394	RASEF	ENST00000376447	164,603	7.06E+02

395	ANXA4	ENST00000355054	164,603	1.49E+03
396	GABRR2	ENST00000229606	164,603	6.75E+03
397	RWDD2	ENST00000369724	164,603	2.91E+04
398	RWDD2	ENST00000014761	164,603	3.73E+04
399	MRPL32	ENST00000223324	164,603	3.73E+04
400	SARS	ENST00000234677	164,603	3.73E+04
401	CCDC74A	ENST00000295171	164,603	3.73E+04
402	CCDC74B	ENST00000310463	164,603	3.73E+04
403	ATP8A1	ENST00000340904	164,603	3.73E+04
404	APP	ENST00000355226	164,603	3.73E+04
405	DRD1IP	ENST00000368555	164,603	3.73E+04
406	SARS	ENST00000369920	164,603	3.73E+04
407	C9orf58	ENST00000372301	164,603	3.73E+04
408	TRAPPC3	ENST00000373159	164,603	3.73E+04
409	TKTL1	ENST00000369915	164,574	4.24E+03
410	FGF7P2	ENST00000332473	164,556	3.75E+04
411	ENTPD1	ENST00000371206	164,535	3.76E+04
412	RTN4	ENST00000317610	164,427	3.39E+03
413	SH3BGR	ENST00000380637	164,393	3.81E+04
414	ATG10	ENST00000282185	164,307	3.84E+04
415	LRFN2	ENST00000338305	164,301	1.71E+03
416	BTF3	ENST00000380591	164,297	3.85E+04
417	CDK5RAP2	ENST00000373942	164,248	3.82E+04
418	CTR9	ENST00000361944	164,243	6.81E+01
419	ZNF143	ENST00000299606	164,189	4.38E+03
420	CD244	ENST00000368032	164,073	3.93E+04
421	ASCL1	ENST00000266744	164,071	5.35E+02
422	GLDC	ENST00000321612	164,044	3.94E+04
423	SHANK1	ENST00000338916	163,951	3.98E+04
424	GPR31	ENST00000239583	163,947	3.98E+04
425	KCNK18	ENST00000334549	163,931	9.11E+03
426	CCDC96	ENST00000310085	163,925	2.37E+03
427	Q2TVT3	ENST00000377614	163,866	4.01E+04



428	UBE2E1	ENST00000306627	163,838	5.97E+03
429	GRIA1	ENST00000285900	163,805	4.04E+04
430	ASB4	ENST00000257621	163,797	4.04E+04
431	WBSCR17	ENST00000333538	163,782	3.89E+02
432	Q9P1L9	ENST00000315478	163,782	4.05E+04
433	ZNF441	ENST00000357901	163,782	4.05E+04
434	THEM5	ENST00000368817	163,782	4.05E+04
435	hCG_18385	ENST00000376856	163,782	4.05E+04
436	IGLV3-9	ENST00000390316	163,782	4.05E+04
437	MRPL52	ENST00000355151	163,764	1.31E+04
438	AMY2B	ENST00000330330	163,737	4.06E+04
439	TUSC3	ENST00000351598	163,737	4.06E+04
440	H2BFS	ENST00000380263	163,725	2.26E+03
441	CCR2	ENST00000292301	163,704	4.08E+04
442	TH1L	ENST00000344018	163,669	4.11E+03
443	NM_018652.4	ENST00000268079	163,666	4.09E+04
444	NFATC2	ENST00000371564	163,636	4.11E+04
445	SLC38A3	ENST00000341160	163,617	8.11E+03
446	Q9HAI8	ENST00000302857	163,614	4.11E+04
447	OAZ1	ENST00000322297	163,612	2.52E+04
448	RAD51L3	ENST00000345766	163,594	4.12E+04
449	SPDYC	ENST00000377185	163,585	4.13E+04
450	SCARA5	ENST00000301906	163,584	4.13E+04
451	SETDB2	ENST00000258672	163,573	4.13E+04
452	CSH2	ENST00000336844	163,572	4.13E+04
453	ZNF597	ENST00000301744	163,514	4.15E+04
454	MST1	ENST00000383728	163,504	4.16E+04
455	LAD1	ENST00000367314	163,456	4.18E+04
456	TMPRSS3	ENST00000380399	163,416	4.19E+04
457	SMARCA2	ENST00000382183	163,398	4.20E+04
458	MUSK	ENST00000374447	163,372	4.21E+04
459	Q2VIK4	ENST00000310962	163,356	4.22E+04
460	FPR1	ENST00000304748	163,349	3.40E+03

461	FHAD1	ENST00000314740	163,303	4.24E+04
462	EPC1	ENST00000375093	163,284	4.25E+04
463	EYA3	ENST00000373864	163,239	4.27E+04
464	C4orf21	ENST00000264370	163,226	4.27E+04
465	PXMP3	ENST00000357039	163,213	1.93E+04
466	Q6IEE8	ENST00000361112	163,175	4.30E+04
467	H2BFS	ENST00000361105	163,158	2.51E+03
468	PPA1	ENST00000373232	163,111	4.32E+04
469	ZDHC11	ENST00000283441	163,091	4.33E+04
470	TNNI1	ENST00000367312	163,054	4.35E+04
471	CCL20	ENST00000358813	163,054	4.35E+04
472	TMEM69	ENST00000290802	163,037	1.81E+03
473	FER1L3	ENST00000359263	163,037	4.35E+04
474	C20orf4	ENST00000320849	163,025	4.36E+04
475	KRTAP9-3	ENST00000377719	163,017	2.15E+04
476	ARL6IP2	ENST00000332337	163,013	4.36E+04
477	SH2D3A	ENST00000245908	163,001	4.37E+04
478	C20orf4	ENST00000373932	162,997	4.37E+04
479	FAM25	ENST00000340853	162,996	4.37E+04
480	FAM25A	ENST00000357539	162,996	4.37E+04
481	DIAPH1	ENST00000389057	162,941	3.60E+02
482	C1orf162	ENST00000369718	162,929	4.40E+04
483	CD53	ENST00000271324	162,927	4.82E+01
484	DDX46	ENST00000389367	162,908	4.41E+04
485	MRPS2	ENST00000241600	162,907	4.41E+04
486	TMEM69	ENST00000372025	162,874	1.86E+03
487	GPR161	ENST00000271357	162,858	4.43E+04
488	MTHFSD	ENST00000322911	162,784	4.46E+04
489	ACTL7B	ENST00000277242	162,777	4.47E+04
490	NDUFA10	ENST00000307300	162,777	4.47E+04
491	ICA1	ENST00000317367	162,777	4.47E+04
492	RNF126	ENST00000340092	162,777	4.47E+04
493	GRM7	ENST00000357716	162,777	4.47E+04

494	Q6ZRI9	ENST00000361041	162,777	4.47E+04
495	OAT	ENST00000368845	162,769	4.47E+04
496	MRPL52	ENST00000311892	162,743	4.48E+04
497	PNPO	ENST00000225573	162,741	4.48E+04
498	C9orf53	ENST00000310702	162,731	4.49E+04
499	FABP3	ENST00000373713	162,685	4.36E+04
500	ENO1	ENST00000358874	162,669	4.51E+04
501	HCK	ENST00000262651	162,663	8.56E+03
502	CLEC4M	ENST00000327325	162,657	4.52E+04
503	GPR161	ENST00000367838	162,652	4.52E+04
504	NPL	ENST00000258317	162,648	4.52E+04
505	NM_203423	ENST00000318930	162,612	1.05E+03
506	ADHFE1	ENST00000276576	162,578	2.59E+00
507	RABGAP1L	ENST00000367690	162,558	4.56E+04
508	NM_203423	ENST00000382541	162,554	1.06E+03
509	ELK4	ENST00000289703	162,529	4.58E+04
510	AOC2	ENST00000253799	162,515	1.10E+04
511	ARHGAP21	ENST00000376408	162,493	4.59E+04
512	OPN4	ENST00000372071	162,478	7.57E+03
513	ENO1	ENST00000234590	162,464	4.60E+04
514	PGS1	ENST00000335081	162,464	4.60E+04
515	HCK	ENST00000375852	162,444	4.61E+04
516	KRT4	ENST00000293774	162,428	4.63E+03
517	DENND1A	ENST00000373620	162,417	4.63E+04
518	CTBP2	ENST00000334808	162,356	4.65E+04
519	ATXN2L	ENST00000359153	162,336	4.66E+04
520	SULT1A3	ENST00000338971	162,327	4.67E+04
521	CWF19L1	ENST00000370386	162,317	1.57E+01
522	SMPDL3A	ENST00000368440	162,317	6.68E+02
523	ZNF570	ENST00000330173	162,317	1.11E+03
524	CCL23	ENST00000293280	162,317	2.18E+03
525	SHANK1	ENST00000293441	162,317	2.18E+03
526	HTR2B	ENST00000258400	162,317	2.95E+03

527	LIG1	ENST00000263274	162,317	3.76E+03
528	CCT2	ENST00000299300	162,317	5.32E+03
529	CDK4	ENST00000257904	162,317	9.26E+03
530	LILRA2	ENST00000251376	162,317	4.67E+04
531	LILRA2	ENST00000251377	162,317	4.67E+04
532	F12	ENST00000253496	162,317	4.67E+04
533	KRT15	ENST00000254043	162,317	4.67E+04
534	ATP2C2	ENST00000262429	162,317	4.67E+04
535	DNAJC5B	ENST00000276570	162,317	4.67E+04
536	WDR90	ENST00000293880	162,317	4.67E+04
537	SERF2	ENST00000337861	162,317	4.67E+04
538	ASS1	ENST00000352480	162,317	4.67E+04
539	C10orf137	ENST00000356792	162,317	4.67E+04
540	SMARCD3	ENST00000356800	162,317	4.67E+04
541	NP_849155.2	ENST00000362026	162,317	4.67E+04
542	FCRL1	ENST00000368175	162,317	4.67E+04
543	NP_056263.1	ENST00000370147	162,317	4.67E+04
544	LOC647839	ENST00000370516	162,317	4.67E+04
545	ASS1	ENST00000372393	162,317	4.67E+04
546	MRRF	ENST00000373723	162,317	4.67E+04
547	PSMD5	ENST00000373920	162,317	4.67E+04
548	PKHD1L1	ENST00000378402	162,317	4.67E+04
549	PRPS2	ENST00000380663	162,317	4.67E+04
550	RAD17	ENST00000380777	162,317	4.67E+04
551	RNF170	ENST00000319073	162,287	4.68E+04
552	NIPSNAP1	ENST00000216121	162,272	1.33E+01
553	CHKA	ENST00000265689	162,272	1.46E+04
554	CYP2C9	ENST00000260682	162,262	4.70E+04
555	AGXT2L2	ENST00000323594	162,212	4.72E+04
556	GBGT1	ENST00000372040	162,138	4.75E+04
557	RNMT	ENST00000262173	162,133	4.76E+04
558	PRPF18	ENST00000378572	162,128	6.44E+03
559	TCF24	ENST00000340798	162,101	4.77E+04

560	C20orf57	ENST00000278979	162,095	4.77E+04
561	Q6ZS29	ENST00000376246	162,069	4.38E+04
562	IBRDC3	ENST00000373456	162,068	1.26E+03
563	CER1	ENST00000380911	162,063	1.10E+03
564	EFCAB5	ENST00000320856	162,063	4.79E+04
565	Q9Y2A2	ENST00000380161	162,051	4.79E+04
566	CCDC50	ENST00000282358	162,023	4.74E+02
567	DOCK2	ENST00000256935	162,005	1.04E+03
568	ZBTB38	ENST00000321464	162,002	4.82E+04
569	C9orf41	ENST00000376830	161,964	4.83E+04
570	CALML3	ENST00000315238	161,936	4.85E+04
571	Q2VIQ3	ENST00000330584	161,919	7.51E+03
572	CTNNA3	ENST00000373744	161,915	6.29E+02
573	ZBTB41	ENST00000329696	161,903	4.86E+04
574	IL3	ENST00000296870	161,857	4.88E+04
575	CPB2	ENST00000181383	161,852	2.77E+02
576	XR_017783.1	ENST00000377951	161,825	4.90E+04
577	IL3	ENST00000379197	161,805	7.38E+03
578	MLXIPL	ENST00000345114	161,805	4.91E+04
579	NP_775906.1	ENST00000316401	161,772	2.19E+04
580	NDEL1	ENST00000299734	161,772	2.67E+04
581	ATG3	ENST00000283290	161,772	4.93E+04
582	Q9H383	ENST00000287450	161,772	4.93E+04
583	RECQL5	ENST00000340830	161,772	4.93E+04
584	RABGAP1L	ENST00000367689	161,772	4.93E+04
585	OR10R2	ENST00000368152	161,772	4.93E+04
586	Q6ZS33	ENST00000370255	161,772	4.93E+04
587	NLRP6	ENST00000382637	161,772	4.93E+04
588	C3orf47	ENST00000383461	161,772	4.93E+04
589	TUBB4	ENST00000264071	161,767	3.88E+04
590	MRPS2	ENST00000371785	161,738	4.94E+04
591	LMAN1	ENST00000251047	161,716	4.95E+04
592	CD1C	ENST00000368169	161,704	4.96E+04

593	URM1	ENST00000372848	161,622	5.00E+04
594	CENPI	ENST00000372927	161,583	2.52E+03
595	DPY19L4	ENST00000342856	161,583	1.61E+04
596	PTPN4	ENST00000263708	161,547	4.86E+03
597	PCMT1	ENST00000367384	161,538	6.93E+03
598	IGLV5-52	ENST00000390289	161,463	3.37E+04
599	APLP1	ENST00000221891	161,445	4.15E+03
600	ME2	ENST00000321341	161,436	1.49E+03
601	TAC1	ENST00000319273	161,319	1.50E+02
602	ZMYND12	ENST00000372565	161,267	2.54E+02
603	DCTN3	ENST00000259632	161,174	1.69E+02
604	WDR25	ENST00000335290	161,174	7.50E+02
605	PLCG2	ENST00000359376	161,174	8.77E+02
606	INSL5	ENST00000304526	161,174	3.65E+03
607	Q6PJF6	ENST00000284676	161,174	3.90E+03
608	DHRS1	ENST00000288111	161,174	4.01E+03
609	SS18L1	ENST00000343379	161,174	4.02E+03
610	GARS	ENST00000265296	161,174	4.54E+03
611	DECR1	ENST00000220764	161,174	8.97E+03
612	SALL4	ENST00000217086	161,174	2.48E+04
613	SSBP1	ENST00000265304	161,174	2.57E+04
614	PRKD2	ENST00000291281	161,174	4.53E+04
615	GOT2	ENST00000245206	161,168	4.41E+03
616	WDR27	ENST00000333572	161,166	3.65E+03
617	CCNG2	ENST00000354403	161,127	5.35E+03
618	CRELD1	ENST00000295982	161,031	3.30E+02
619	HMGN3	ENST00000344726	161,025	1.04E+04
620	IFIT3	ENST00000371818	160,983	1.96E+04
621	C1orf162	ENST00000343534	160,966	1.17E+04
622	C10orf91	ENST00000321248	160,951	3.53E+04
623	OPN3	ENST00000366554	160,922	6.34E+03
624	EIF2AK3	ENST00000303236	160,881	2.14E+04
625	TMOD3	ENST00000308580	160,862	3.36E+02

626	MLLT10	ENST00000377091	160,784	3.44E+03
627	SMAD9	ENST00000379826	160,769	2.95E+03
628	Q71RC1	ENST00000382818	160,767	2.22E+03
629	TREH	ENST00000264029	160,767	3.13E+03
630	KLHL12	ENST00000367258	160,767	3.95E+03
631	Q9P1L8	ENST00000361252	160,767	2.98E+04
632	CCDC64	ENST00000257583	160,602	3.40E+03
633	TRBV18	ENST00000390392	160,602	2.43E+04
634	SLC12A6	ENST00000354181	160,462	4.02E+03
635	FAM21B	ENST00000374359	160,338	2.54E+03
636	DEC1	ENST00000374016	160,277	3.24E+03
637	Q8NFD4	ENST00000334373	160,235	3.44E+03
638	BICD1	ENST00000281474	160,228	9.88E+02
639	CLDN15	ENST00000308344	160,222	3.28E+03
640	PAN3	ENST00000380958	160,187	2.01E+02
641	TRNT1	ENST00000280591	160,121	1.93E+02
642	FADS6	ENST00000310226	160,104	3.35E+03
643	NSMAF	ENST0000038176	160,075	1.82E+04
644	PRDM7	ENST00000296682	160,055	3.74E+04
645	TMEM126B	ENST00000358867	160,031	3.45E+01
646	SVEP1	ENST00000374463	160,031	3.48E+01
647	FMO4	ENST00000367749	160,031	1.49E+02
648	ALLC	ENST00000252505	160,031	2.93E+02
649	CHEK2	ENST00000382580	160,031	8.36E+02
650	MLSTD1	ENST00000182377	160,031	3.10E+03
651	FAIM	ENST00000338446	160,031	3.40E+03
652	ARHGAP9	ENST00000340423	160,031	4.17E+03
653	DDX59	ENST00000331314	160,031	5.71E+03
654	ACTC1	ENST00000290378	160,031	1.48E+04
655	IFIT1	ENST00000371804	160,031	4.67E+04
656	C18orf34	ENST00000383095	160,031	4.68E+04
657	MBNL2	ENST00000376685	160,013	4.99E+02
658	SLITRK4	ENST00000356928	159,942	1.94E+03

659	TMEM45A	ENST00000323523	159,903	1.30E+03
660	TMEM69	ENST00000290802	159,819	1.81E+03
661	HOXA5	ENST00000222726	159,776	1.04E+03
662	IZUMO1	ENST00000332955	159,762	3.14E+02
663	SLC25A14	ENST00000339231	159,762	3.81E+03
664	TJP2	ENST00000377245	159,739	4.01E+04
665	TLR2	ENST00000260010	159,692	4.66E+03
666	SYN2	ENST00000341648	159,689	3.98E+03
667	TMEM69	ENST00000372025	159,659	1.86E+03
668	LRRN2	ENST00000367177	159,639	1.08E+04
669	GPD2	ENST00000310454	159,606	6.03E+01
670	PLAU	ENST00000372764	159,601	5.42E+03
671	SLFNL1	ENST00000359345	159,535	4.65E+03
672	GRPR	ENST00000380289	159,293	5.00E+04
673	NECAP2	ENST00000375568	159,253	9.32E+02
674	IGF2R	ENST00000356956	159,231	1.26E+04
675	FMO5	ENST00000254090	159,191	2.86E+03
676	CDH15	ENST00000289746	159,113	4.05E+03
677	IL12RB2	ENST00000262345	159,092	4.61E+03
678	NUAK2	ENST00000367157	158,976	2.99E+03
679	ASXL1	ENST00000375689	158,974	2.13E+03
680	FMO1	ENST00000367750	158,971	4.99E+03
681	SH2B1	ENST00000359285	158,928	4.79E+03
682	POLH	ENST00000372236	158,908	7.47E+03
683	GNG11	ENST00000248564	158,888	8.21E+02
684	FLJ16369	ENST00000250479	158,888	2.16E+03
685	GPR77	ENST00000257267	158,888	2.16E+03
686	ATP5S	ENST00000245448	158,888	3.36E+03
687	CPB1	ENST00000282957	158,888	4.21E+03
688	SERPINI2	ENST00000264677	158,888	4.23E+03
689	JAM2	ENST00000312957	158,888	4.23E+03
690	CASC1	ENST00000320267	158,888	4.23E+03
691	AASS	ENST00000358954	158,888	5.75E+03



692	PSTPIP1	ENST00000379595	158,888	8.61E+03
693	CDC2	ENST00000373811	158,843	3.95E+03
694	RASGEF1B	ENST00000264400	158,795	1.92E+04
695	SMNDC1	ENST00000369603	158,758	1.47E+00
696	Q71RC1	ENST00000382818	158,758	2.22E+03
697	MLNR	ENST00000218721	158,758	4.98E+03
698	ZP1	ENST00000278853	158,758	3.81E+04
699	Q9HAC4	ENST00000206466	158,758	4.21E+04
700	H2BFS	ENST00000380263	158,672	2.26E+03
701	ALS2	ENST00000264276	158,632	1.20E+04
702	USP44	ENST00000258499	158,517	3.39E+02
703	SLC35A4	ENST00000323146	158,503	1.13E+04
704	ZNF474	ENST00000296600	158,488	2.72E+04
705	TP53	ENST00000269305	158,446	3.09E+04
706	CCDC96	ENST00000310085	158,424	2.37E+03
707	RRH	ENST00000317735	158,423	4.62E+03
708	DUSP22	ENST00000344450	158,416	5.85E+03
709	NP_060358.2	ENST00000331849	158,386	1.73E+04
710	OPTC	ENST00000367222	158,361	4.66E+03
711	MBOAT5	ENST00000261407	158,335	3.67E+01
712	CSMD1	ENST00000335551	158,335	4.70E+03
713	CRNN	ENST00000271835	158,333	6.86E+03
714	SFRS11	ENST00000370950	158,189	1.17E+02
715	TBCK	ENST00000273980	158,132	1.53E+02
716	H2BFS	ENST00000361105	158,123	2.51E+03
717	C2orf17	ENST00000273048	158,121	1.49E+04
718	CACNA1A	ENST00000360228	158,103	6.72E+02
719	TTC19	ENST00000261647	158,101	6.44E+03
720	PENK	ENST00000314922	158,064	9.77E+02
721	FAM21B	ENST00000374359	158,064	2.54E+03
722	C15orf48	ENST00000344300	158,057	4.96E+03
723	ITM2B	ENST00000378565	158,009	1.70E+00
724	RAE1	ENST00000371242	157,893	1.41E+02

725	PCDH15	ENST00000373965	157,763	5.41E+03
726	Q6ZU72	ENST00000369791	157,753	4.21E+04
727	Q96IR2	ENST00000357015	157,753	4.69E+04
728	Q9UHZ6	ENST00000360740	157,753	4.70E+04
729	FTSJ2	ENST00000332565	157,749	2.44E+04
730	CSTF2	ENST00000372974	157,745	5.06E+02
731	PCM1	ENST00000325083	157,745	6.29E+02
732	CYP2F1	ENST00000331105	157,745	1.34E+03
733	CLCN5	ENST00000376088	157,745	3.36E+03
734	CLCN5	ENST00000376091	157,745	3.36E+03
735	TBCB	ENST00000221855	157,745	7.24E+03
736	PAOX	ENST00000278060	157,745	7.69E+03
737	COPB2	ENST00000333188	157,745	8.81E+03
738	SAKS1	ENST00000294119	157,745	1.38E+04
739	NP_689579.3	ENST00000368011	157,745	1.78E+04
740	TCF4	ENST00000354452	157,745	2.58E+04
741	HDAC2	ENST00000368632	157,745	3.36E+04
742	GKN2	ENST00000328895	157,745	3.67E+04
743	WDR64	ENST00000366552	157,699	1.26E+03
744	QDPR	ENST00000382282	157,649	1.06E+04
745	QPRT	ENST00000219771	157,524	6.52E+03
746	LHX4	ENST00000263726	157,511	9.80E+03
747	CA8	ENST00000317995	157,455	1.06E+04
748	GOLGA4	ENST00000361924	157,387	3.52E+03
749	SLC5A6	ENST00000380196	157,326	6.85E+03
750	FAT	ENST00000260147	157,317	1.18E+03
751	POLDIP3	ENST00000252115	157,306	8.31E+03
752	EXDL2	ENST00000193422	157,291	8.55E+03
753	CDH10	ENST00000382239	157,279	1.98E+03
754	OC90	ENST00000254627	157,262	2.02E+04
755	BEXL1	ENST00000372691	157,234	3.64E+03
756	ELAC2	ENST00000338034	157,201	7.75E+03
757	DHX37	ENST00000308736	157,148	6.66E+03

758	WRNIP1	ENST00000380773	157,123	4.03E+04
759	CCDC60	ENST00000327554	157,122	6.09E+03
760	UGP2	ENST00000337130	157,122	2.64E+04
761	Q8NH96	ENST00000268912	157,115	3.69E+03
762	COL25A1	ENST00000333642	157,035	4.10E+04
763	NFATC1	ENST00000329101	157,008	7.81E+03
764	C6orf162	ENST00000229570	156,968	1.17E+01
765	VAX1	ENST00000369206	156,906	1.51E+03
766	HGS	ENST00000329138	156,772	4.96E+02
767	ETV2	ENST00000379026	156,748	4.01E+03
768	S100A14	ENST00000368702	156,723	1.31E+04
769	KBTBD10	ENST00000284669	156,664	6.45E+03
770	GDF10	ENST00000224605	156,619	7.14E+02
771	C1orf49	ENST00000319416	156,602	3.45E+01
772	UNC50	ENST00000357765	156,602	6.27E+01
773	FGL1	ENST00000221204	156,602	3.47E+02
774	MND1	ENST00000240488	156,602	5.80E+02
775	HPS6	ENST00000370027	156,602	1.01E+03
776	RNF17	ENST00000381927	156,602	1.40E+03
777	RDBP	ENST00000375429	156,602	1.45E+03
778	ATP5S	ENST00000245448	156,602	3.36E+03
779	CLCN5	ENST00000376088	156,602	3.36E+03
780	CLCN5	ENST00000376091	156,602	3.36E+03
781	HPS6	ENST00000299238	156,602	4.17E+03
782	SQRDL	ENST00000260324	156,602	6.71E+03
783	TMEM108	ENST00000321871	156,602	1.97E+04
784	DOCK2	ENST00000256935	156,568	1.04E+03
785	RTN4	ENST00000317610	156,543	3.39E+03
786	CCDC64	ENST00000257583	156,536	3.40E+03
787	GIMAP4	ENST00000255945	156,536	9.48E+03
788	MLLT10	ENST00000377091	156,468	3.44E+03
789	ATP10A	ENST00000356865	156,384	4.13E+01
790	SERPINE1	ENST00000223095	156,365	2.65E+04

791	FLOT2	ENST00000335362	156,358	3.07E+04
792	GEMIN5	ENST00000285873	156,353	1.91E+04
793	GOLGA4	ENST00000361924	156,345	3.52E+03
794	VBP1	ENST00000286428	156,303	1.02E+04
795	C1orf74	ENST00000294811	156,301	1.00E+04
796	MCF2	ENST00000370578	156,298	1.93E+03
797	KIAA1012	ENST00000283351	156,252	8.98E+03
798	GBE1	ENST00000264326	156,183	8.44E+03
799	BEXL1	ENST00000372691	156,172	3.64E+03
800	CENTG1	ENST00000328568	156,167	7.08E+03
801	Q8NH96	ENST00000268912	156,108	3.69E+03
802	HS3ST2	ENST00000261374	156,056	1.38E+04
803	Q8NGG1	ENST00000313276	156,012	4.48E+04
804	AFG3L2	ENST00000269143	155,994	8.95E+03
805	WWC1	ENST00000265293	155,992	1.14E+04
806	PSMD7	ENST00000219313	155,985	4.62E+03
807	RARRES1	ENST00000237696	155,955	6.78E+01
808	NUMBL	ENST00000252891	155,921	2.77E+02
809	FAM83G	ENST00000388995	155,917	2.57E+03
810	LRRC30	ENST00000383467	155,901	9.60E+03
811	ACTN1	ENST00000193403	155,828	8.51E+02
812	NES	ENST00000368223	155,805	2.50E+03
813	SLC25A15	ENST00000379534	155,776	5.11E+00
814	AICDA	ENST00000229335	155,743	1.51E+03
815	Q6ZSQ7	ENST00000330476	155,743	3.95E+03
816	KLHL12	ENST00000367258	155,743	3.95E+03
817	NUDT8	ENST00000376693	155,743	3.16E+04
818	CAB39L	ENST00000355854	155,722	2.04E+02
819	TMEM16B	ENST00000327087	155,564	7.92E+03
820	HCCS	ENST00000321143	155,498	1.03E+04
821	MERTK	ENST00000295408	155,489	2.95E+04
822	SNX6	ENST00000362031	155,483	8.82E+03
823	CASP8	ENST00000343290	155,459	1.30E+02

824	C16orf61	ENST00000219400	155,459	7.27E+02
825	C16orf73	ENST00000293936	155,459	7.27E+02
826	HPS6	ENST00000370027	155,459	1.01E+03
827	ATP5B	ENST00000262030	155,459	1.47E+03
828	MAPKAPK5	ENST00000202788	155,459	1.54E+03
829	BPIL1	ENST00000170150	155,459	4.17E+03
830	HPS6	ENST00000299238	155,459	4.17E+03
831	SHC3	ENST00000375831	155,459	4.17E+03
832	NP_064597.1	ENST00000268130	155,459	8.08E+03
833	RAP1GDS1	ENST00000339360	155,459	8.08E+03
834	RSPO3	ENST00000368317	155,459	8.08E+03
835	NPPB	ENST00000376468	155,459	8.08E+03
836	DCP1A	ENST00000294241	155,459	9.25E+03
837	C12orf60	ENST00000330828	155,459	1.07E+04
838	TBRG1	ENST00000375005	155,459	1.27E+04
839	C20orf67	ENST00000372409	155,459	2.34E+04
840	FAM26D	ENST00000368596	155,452	4.17E+03
841	FAM26D	ENST00000368596	155,452	4.17E+03
842	TMEM106C	ENST00000256686	155,451	2.16E+04
843	TACR2	ENST00000373306	155,417	2.49E+04
844	TNFAIP8L3	ENST00000327536	155,399	1.52E+03
845	MCCC2	ENST00000340941	155,373	8.21E+03
846	C5AR1	ENST00000355085	155,316	9.86E+02
847	TMBIM4	ENST00000286424	155,311	8.31E+03
848	SELK	ENST00000231908	155,309	1.30E+04
849	KIAA1815	ENST00000339450	155,284	8.35E+03
850	HNRPR	ENST00000374612	155,263	4.32E+03
851	HNRPR	ENST00000374614	155,214	4.36E+03
852	NP_775813.1	ENST00000280800	155,206	9.21E+03
853	HNRPR	ENST00000374616	155,189	4.39E+03
854	CTSD	ENST00000382005	155,184	8.50E+03
855	C8B	ENST00000371237	155,166	1.13E+03
856	GOT2	ENST00000245206	155,162	4.41E+03

857	BLMH	ENST00000261714	155,124	1.76E+04
858	ZSCAN20	ENST00000326544	155,118	1.32E+04
859	BCCIP	ENST00000368759	155,052	8.71E+03
860	ZRANB2	ENST00000340681	155,046	8.94E+03
861	NP_116012.2	ENST00000260011	155,021	1.75E+03
862	EDG4	ENST00000358804	154,997	2.29E+02
863	DUXA	ENST00000376239	154,984	1.19E+04
864	GPR141	ENST00000334425	154,974	5.02E+02
865	PSMD7	ENST00000219313	154,917	4.62E+03
866	KRT4	ENST00000293774	154,898	4.63E+03
867	FAM117A	ENST00000240364	154,897	2.82E+03
868	TBCK	ENST00000273980	154,883	1.53E+02
869	TBCK	ENST00000273980	154,883	1.53E+02
870	SH3BGR	ENST00000333634	154,883	4.64E+03
871	BRD2	ENST00000374825	18,512	8.49E+02
872	MSI2	ENST00000284073	18,039	7.64E+03
873	KLC3	ENST00000337446	17,832	9.43E+03
874	MRPL41	ENST00000371443	17,832	9.43E+03
875	ADAMTS6	ENST00000381052	17,749	1.03E+04
876	SLC25A15	ENST00000338625	17,728	1.05E+04
877	PPP2CB	ENST00000221138	17,657	6.90E+03
878	ASPH	ENST00000389214	17,397	1.46E+04
879	DQX1	ENST00000272440	17,291	7.34E+02
880	ZUBR1	ENST00000375219	17,196	1.79E+04
881	TRIM67	ENST00000366653	17,182	2.93E+03
882	ZUBR1	ENST00000375225	17,122	1.93E+04
883	ZUBR1	ENST00000375267	17,098	1.98E+04
884	GOLGA6	ENST00000290438	16,981	2.22E+04
885	NP_061122.4	ENST00000300576	16,981	2.22E+04
886	CDRT1	ENST00000354433	16,962	2.27E+04
887	EPB41L5	ENST00000331393	16,833	2.58E+04
888	SH3YL1	ENST00000309148	16,775	8.01E+03
889	CNTNAP3	ENST00000323947	16,764	2.76E+04

890	CNTNAP3B	ENST00000377561	16,764	2.76E+04
891	PSG2	ENST00000244295	16,756	2.79E+04
892	RMND1	ENST00000367303	16,737	7.82E+03
893	ATP13A2	ENST00000341676	16,717	2.90E+04
894	CPNE9	ENST00000383832	16,705	2.93E+04
895	LRRC8D	ENST00000337338	16,657	2.35E+03
896	NP_001032302.1	ENST00000301896	16,657	3.07E+04
897	TBC1D20	ENST00000382121	16,605	3.24E+04
898	Q6ZNQ2	ENST00000381466	16,602	3.25E+04
899	ZNF545	ENST00000319849	16,587	1.68E+03
900	PGLYRP4	ENST00000368739	16,535	3.47E+04
901	NEIL2	ENST00000284503	16,522	5.33E+03
902	RDH10	ENST00000240285	16,519	9.28E+02
903	WDR69	ENST00000373666	16,505	6.46E+02
904	WDR69	ENST00000373666	16,505	6.46E+02
905	SOHLH2	ENST00000379881	16,494	7.51E+03
906	FLOT1	ENST00000376389	16,458	7.61E+03
907	IL18	ENST00000280357	16,411	4.26E+03
908	GLDC	ENST00000381336	16,388	4.01E+04
909	COL6A3	ENST00000295550	16,378	4.05E+04
910	PLEKHO1	ENST00000025469	16,346	7.29E+01
911	IGSF21	ENST00000251296	16,346	3.77E+02
912	MORN3	ENST00000355329	16,346	4.13E+02
913	RNF6	ENST00000339626	16,346	8.85E+02
914	Q6ZP14	ENST00000378347	16,346	8.85E+02
915	ANKRD37	ENST00000335174	16,346	8.99E+02
916	WDR63	ENST00000355948	16,346	1.16E+03
917	GPR77	ENST00000257267	16,346	2.16E+03
918	GPR177	ENST00000354777	16,346	2.50E+03
919	C3orf25	ENST00000326085	16,346	1.23E+04
920	MYOZ1	ENST00000359322	16,346	2.16E+04
921	AKAP4	ENST00000358526	16,346	3.58E+04
922	MYL2	ENST00000228841	16,346	4.02E+04

923	EBNA1BP2	ENST00000236051	16,346	4.18E+04
924	CCT7	ENST00000258091	16,346	4.18E+04
925	ATF2	ENST00000264110	16,346	4.18E+04
926	FCN3	ENST00000270879	16,346	4.18E+04
927	REG3G	ENST00000272324	16,346	4.18E+04
928	WDR63	ENST00000294664	16,346	4.18E+04
929	TGIF2LY	ENST00000321217	16,346	4.18E+04
930	RAD1	ENST00000325577	16,346	4.18E+04
931	FCN3	ENST00000354982	16,346	4.18E+04
932	Q6ZRL6	ENST00000356374	16,346	4.18E+04
933	PPIA	ENST00000358455	16,346	4.18E+04
934	ARV1	ENST00000366655	16,346	4.18E+04
935	C10orf90	ENST00000368674	16,346	4.18E+04
936	C10orf137	ENST00000368813	16,346	4.18E+04
937	PLEKHO1	ENST00000369126	16,346	4.18E+04
938	WDR63	ENST00000370596	16,346	4.18E+04
939	ZWINT	ENST00000373940	16,346	4.18E+04
940	AKAP4	ENST00000376064	16,346	4.18E+04
941	IFNA4	ENST00000380222	16,346	4.18E+04
942	TGIF2LY	ENST00000383049	16,346	4.18E+04
943	ZF36	ENST00000341191	16,338	4.21E+04
944	SETDB2	ENST00000317257	16,334	1.63E+03
945	LOC653698	ENST00000243148	16,328	4.25E+04
946	GIYD2	ENST00000344620	16,328	4.25E+04
947	IFNA17	ENST00000380214	16,297	4.38E+04
948	GMPR	ENST00000259727	16,285	4.43E+04
949	BIRC2	ENST00000227758	16,272	4.49E+04
950	TSGA13	ENST00000354969	16,203	4.80E+04
951	ARAF	ENST00000377039	16,181	4.91E+04
952	RSRC2	ENST00000331738	16,135	3.72E+01
953	RND2	ENST00000225973	16,054	8.60E+03
954	Q9UHT8	ENST00000355239	16,032	4.95E+04
955	SCIN	ENST00000297029	16,004	1.03E+04



956	SCGN	ENST00000377961	15,993	4.21E+03
957	FNDC1	ENST00000297267	15,819	4.47E+04
958	NP_775734.1	ENST00000389613	15,788	5.52E+03
959	BAG2	ENST00000370693	15,734	5.68E+03
960	DRG1	ENST00000331457	15,726	8.75E+01
961	APBB1IP	ENST00000376236	15,687	1.73E+04
962	SAMD1	ENST00000269724	15,629	8.18E+02
963	DKK1	ENST00000373970	15,579	1.86E+04
964	MYO1E	ENST00000288235	15,576	2.23E+04
965	DENND1B	ENST00000367396	15,573	8.23E+03
966	LOH12CR1	ENST00000314565	15,508	8.67E+03
967	SNX11	ENST00000359238	16.53	3.49E+04
968	TKTL1	ENST00000217905	16.46	3.73E+04
969	SPCS1	ENST00000233025	15.8	5.55E+03

**Supplemental Table 6: putative target genes for miR-143 identified with TargetScan**

#	Target gene	Representative transcript	Total context+ score	Aggregate P
1	DENND1B	NM_001195215	-0.67	0.46
2	VASH1	NM_014909	-0.65	0.61
3	SLC30A8	NM_001172811	-0.60	0.50
4	ABL2	NM_001136000	-0.59	0.57
5	TTPA	NM_000370	-0.59	0.67
6	SLC25A15	NM_014252	-0.52	0.79
7	AKAP6	NM_004274	-0.48	0.76
8	ATG2B	NM_018036	-0.47	0.27
9	DLG3	NM_001166278	-0.45	0.42
10	ZNF583	NM_001159860	-0.45	0.12
11	HK2	NM_000189	-0.43	0.39
12	FOSL2	NM_005253	-0.43	0.43
13	EARS2	NM_001083614	-0.42	0.17
14	GIGYF2	NM_001103146	-0.41	0.85
15	ARHGAP26	NM_001135608	-0.41	0.50
16	ATP11C	NM_001010986	-0.40	0.26
17	GOLM1	NM_016548	-0.40	< 0.1
18	FADS6	NM_178128	-0.39	< 0.1
19	PAN3	NM_175854	-0.37	0.15
20	DIP2B	NM_173602	-0.37	0.39
21	UBE2E3	NM_006357	-0.37	0.11
22	IGFBP5	NM_000599	-0.36	0.79
23	NFATC1	NM_006162	-0.36	0.36
24	C13orf33	NM_032849	-0.36	0.18
25	MYO3A	NM_017433	-0.35	< 0.1
26	SECISBP2L	NM_001193489	-0.35	0.36
27	NPR3	NM_000908	-0.33	0.79
28	LMO4	NM_006769	-0.33	0.71
29	CACNA1A	NM_000068	-0.33	0.36
30	NRSN1	NM_080723	-0.32	0.11

31	PSME4	NM_014614	-0.32	< 0.1
32	PCMT1	NM_005389	-0.32	0.11
33	SIX4	NM_017420	-0.31	0.39
34	CALN1	NM_001017440	-0.31	0.21
35	NECAP1	NM_015509	-0.30	0.54
36	CCDC58	NM_001017928	-0.30	0.12
37	SFMBT2	NM_001018039	-0.29	0.11
38	GDF10	NM_004962	-0.29	0.37
39	BRD2	NM_001113182	-0.29	0.28
40	PLEKHG2	NM_022835	-0.29	< 0.1
41	HIPK2	NM_001113239	-0.29	0.68
42	MCF2	NM_001099855	-0.29	0.20
43	WWC3	NM_015691	-0.28	0.36
44	SP7	NM_001173467	-0.28	0.22
45	CRELD1	NM_001031717	-0.28	0.78
46	MAPK7	NM_002749	-0.28	0.78
47	RSRC2	NM_023012	-0.28	0.11
48	UBE2E1	NM_001202476	-0.28	0.18
49	NCBP1	NM_002486	-0.27	< 0.1
50	HTR7	NM_000872	-0.27	< 0.1
51	TOR1AIP2	NM_022347	-0.27	0.61
52	XK	NM_021083	-0.27	0.11
53	TARDBP	NM_007375	-0.27	0.44
54	ABCC4	NM_005845	-0.27	0.11
55	ARID3B	NM_006465	-0.27	0.58
56	TUB	NM_003320	-0.26	0.35
57	ZBTB44	NM_014155	-0.26	0.79
58	CRLF3	NM_015986	-0.26	0.36
59	KLF5	NM_001730	-0.26	< 0.1
60	PTPN11	NM_002834	-0.25	0.43
61	SOBP	NM_018013	-0.25	0.24
62	RNF6	NM_005977	-0.24	0.11
63	STXBP1	NM_001032221	-0.24	0.11

64	ADD3	NM_001121	-0.24	0.11
65	SCAMP4	NM_079834	-0.24	0.11
66	OTUD4	NM_001102653	-0.24	0.54
67	CALM1	NM_006888	-0.24	0.11
68	AFF1	NM_001166693	-0.23	0.73
69	FAM71F1	NM_032599	-0.23	< 0.1
70	LARP4	NM_001170803	-0.23	0.36
71	KRAS	NM_004985	-0.23	0.82
72	HTR2C	NM_000868	-0.23	0.24
73	CHST10	NM_004854	-0.23	< 0.1
74	RGSL1	NM_001137669	-0.23	0.11
75	TAOK2	NM_004783	-0.22	0.12
76	GABARAPL1	NM_031412	-0.22	0.11
77	ATP10B	NM_025153	-0.22	< 0.1
78	MLLT3	NM_004529	-0.22	0.11
79	FMN1	NM_001103184	-0.22	0.30
80	DCAKD	NM_001128631	-0.22	0.11
81	USP45	NM_001080481	-0.22	0.76
82	FAM60A	NM_001135811	-0.22	0.36
83	BBS9	NM_001033604	-0.22	0.29
84	MIP	NM_012064	-0.21	0.11
85	ZNF236	NM_007345	-0.21	< 0.1
86	C20orf11	NM_017896	-0.21	0.49
87	GFPT2	NM_005110	-0.21	< 0.1
88	AP2B1	NM_001030006	-0.21	0.17
89	SLC35F1	NM_001029858	-0.20	0.21
90	PAPD5	NM_001040284	-0.20	0.40
91	PLEKHM3	NM_001080475	-0.20	0.32
92	FAM111A	NM_001142519	-0.20	< 0.1
93	TPM3	NM_001043351	-0.20	0.81
94	EPT1	NM_033505	-0.19	0.38
95	FXYD3	NM_001136007	-0.19	0.13
96	SERPINE1	NM_000602	-0.19	0.12

97	SCAF8	NM_014892	-0.19	0.11
98	ADCYAP1R1	NM_001118	-0.19	0.24
99	CREBL2	NM_001310	-0.19	0.11
100	EPG5	NM_020964	-0.19	< 0.1
101	LOXL4	NM_032211	-0.18	0.34
102	ARL15	NM_019087	-0.18	0.11
103	PC	NM_000920	-0.18	0.36
104	EGLN1	NM_022051	-0.18	0.11
105	HHLA2	NM_007072	-0.18	0.11
106	SSH2	NM_033389	-0.18	0.24
107	NUAK2	NM_030952	-0.17	0.78
108	ENSA	NM_207043	-0.17	0.11
109	TMOD2	NM_001142885	-0.17	0.42
110	CCDC149	NM_001130726	-0.17	0.11
111	TCF20	NM_005650	-0.17	0.11
112	TMEM167B	NM_020141	-0.17	0.11
113	MYBL2	NM_002466	-0.17	0.26
114	PLAU	NM_001145031	-0.17	0.11
115	SLC16A2	NM_006517	-0.17	0.73
116	DAPK1	NM_004938	-0.16	0.11
117	ZHX3	NM_015035	-0.16	0.21
118	SYT3	NM_001160328	-0.16	0.11
119	DDAH1	NM_001134445	-0.16	0.37
120	TPM4	NM_001145160	-0.16	0.29
121	MARCH3	NM_178450	-0.15	0.15
122	DCX	NM_000555	-0.15	0.16
123	TSPAN14	NM_001128309	-0.15	0.29
124	UPF1	NM_002911	-0.15	0.72
125	DNAJC3	NM_006260	-0.15	0.26
126	IGF2R	NM_000876	-0.15	0.19
127	ASH1L	NM_018489	-0.15	0.26
128	FAM108B1	NM_001025780	-0.15	0.26
129	PDIA6	NM_005742	-0.15	0.26

130	WNT5B	NM_030775	-0.15	0.21
131	VPS37A	NM_001145152	-0.14	0.33
132	SLC7A11	NM_014331	-0.14	0.13
133	CACNA1C	NM_000719	-0.14	0.46
134	CBX5	NM_001127321	-0.14	0.52
135	SVEP1	NM_153366	-0.14	0.36
136	RPS6KL1	NM_031464	-0.14	0.26
137	SAMD8	NM_001174156	-0.14	0.30
138	PRKCE	NM_005400	-0.14	0.79
139	COL5A3	NM_015719	-0.14	0.26
140	UNC5A	NM_133369	-0.14	0.30
141	FAM117A	NM_030802	-0.14	0.11
142	BCORL1	NM_021946	-0.14	0.11
143	TXLNB	NM_153235	-0.14	0.24
144	TMEM132B	NM_052907	-0.13	0.11
145	CREBZF	NM_001039618	-0.13	0.53
146	CTGF	NM_001901	-0.13	0.26
147	KRT80	NM_001081492	-0.13	0.17
148	SIDT1	NM_017699	-0.13	< 0.1
149	MAF	NM_001031804	-0.13	0.79
150	AMOTL1	NM_130847	-0.13	0.27
151	TNP1	NM_003284	-0.13	0.26
152	MKL2	NM_014048	-0.13	0.46
153	LIMK2	NM_005569	-0.13	0.11
154	COL5A1	NM_000093	-0.12	0.15
155	ZNF148	NM_021964	-0.12	0.51
156	LIFR	NM_001127671	-0.12	0.34
157	PUS10	NM_144709	-0.12	0.26
158	ERCC6	NM_000124	-0.12	0.11
159	KANK4	NM_181712	-0.12	0.11
160	ARPC4-TTLL3	NM_001198793	-0.12	0.11
161	ZNF618	NM_133374	-0.12	0.55

162	ZNF275	NM_001080485	-0.12	0.42
163	LBH	NM_030915	-0.12	0.36
164	TAPBP	NM_003190	-0.12	0.12
165	C20orf111	NM_016470	-0.12	0.26
166	MARCKS	NM_002356	-0.11	0.26
167	MEX3C	NM_016626	-0.11	0.11
168	QKI	NM_206854	-0.11	0.71
169	VAMP7	NM_001145149	-0.11	0.26
170	GSR	NM_000637	-0.11	0.26
171	KLLN	NM_001126049	-0.11	0.11
172	MAPK1	NM_002745	-0.11	0.37
173	ARHGEF40	NM_018071	-0.11	0.11
174	HOXA7	NM_006896	-0.11	0.11
175	SLCO2A1	NM_005630	-0.10	0.16
176	LIMK1	NM_001204426	-0.10	0.75
177	SLC39A10	NM_001127257	-0.10	0.16
178	NDFIP1	NM_030571	-0.10	0.26
179	FAM100B	NM_182565	-0.10	0.26
180	SCN2B	NM_004588	-0.10	0.26
181	TRPS1	NM_014112	-0.10	0.47
182	RMND5A	NM_022780	-0.10	0.11
183	FUT4	NM_002033	-0.09	0.11
184	SLU7	NM_006425	-0.09	0.26
185	MBOAT2	NM_138799	-0.09	0.26
186	PGK1	NM_000291	-0.09	0.26
187	PDGFRA	NM_006206	-0.09	0.26
188	ARHGEF1	NM_004706	-0.09	0.33
189	CPEB2	NM_001177381	-0.09	0.26
190	GRHL2	NM_024915	-0.09	0.56
191	SLC25A25	NM_001006641	-0.09	0.26
192	RGAG1	NM_020769	-0.08	0.26
193	INO80D	NM_017759	-0.08	0.20
194	AP3M1	NM_012095	-0.08	0.26

195	DTNB	NM_021907	-0.08	0.11
196	SLC5A12	NM_178498	-0.08	0.26
197	CPLX2	NM_001008220	-0.08	0.13
198	RNF165	NM_152470	-0.08	0.53
199	TOB2	NM_016272	-0.07	0.11
200	TTYH3	NM_025250	-0.07	0.42
201	CPD	NM_001199775	-0.07	0.72
202	RICTOR	NM_152756	-0.07	0.15
203	PPP2R3A	NM_001190447	-0.07	0.26
204	C12orf68	NM_001013635	-0.07	0.11
205	FNDC3B	NM_001135095	-0.07	0.26
206	CBL	NM_005188	-0.06	< 0.1
207	SH3PXD2A	NM_014631	-0.06	0.84
208	RASAL2	NM_004841	-0.06	0.36
209	DIXDC1	NM_001037954	-0.06	0.15
210	FGF1	NM_000800	-0.06	0.39
211	FAM83F	NM_138435	-0.06	0.26
212	POU2F1	NM_001198783	-0.06	< 0.1
213	SPRY3	NM_005840	-0.05	0.18
214	CREB5	NM_001011666	-0.05	0.32
215	ATOH8	NM_032827	-0.05	0.34
216	HSPB7	NM_014424	-0.05	0.26
217	HDAC7	NM_001098416	-0.05	0.11
218	BCL2	NM_000633	-0.05	0.29
219	TSKU	NM_015516	-0.05	0.26
220	TRPC5	NM_012471	-0.05	0.26
221	SLC28A3	NM_001199633	-0.05	0.26
222	KPNA1	NM_002264	-0.05	0.15
223	ST8SIA4	NM_005668	-0.04	0.79
224	LARP1	NM_015315	-0.04	0.29
225	KCMF1	NM_020122	-0.04	0.27
226	SMAD3	NM_001145102	-0.04	0.13
227	PLXNA4	NM_020911	-0.04	0.37



228	CTC1	NM_025099	-0.04	0.11
229	TANC2	NM_025185	-0.04	0.35
230	ABHD2	NM_007011	-0.04	0.21
231	ENPP1	NM_006208	-0.04	0.26
232	SEZ6L	NM_001184773	-0.04	0.26
233	MLL2	NM_003482	-0.04	0.26
234	CACNA1E	NM_000721	-0.04	0.26
235	BBC3	NM_001127240	-0.04	0.26
236	MDGA1	NM_153487	-0.04	0.26
237	PTGS2	NM_000963	-0.04	0.26
238	ADD2	NM_001185054	-0.04	0.26
239	NRSN2	NM_024958	-0.04	0.11
240	SLC38A2	NM_018976	-0.03	0.42
241	USP46	NM_001134223	-0.03	0.36
242	LRRC8B	NM_001134476	-0.03	0.26
243	PLAGL2	NM_002657	-0.03	0.15
244	RALGPS1	NM_014636	-0.03	0.11
245	AMMECR1	NM_001025580	-0.03	0.11
246	ROD1	NM_001163788	-0.03	0.11
247	TET2	NM_001127208	-0.03	< 0.1
248	ANKRD33B	NM_001164440	-0.03	< 0.1
249	SLC22A3	NM_021977	-0.03	< 0.1
250	EEF2K	NM_013302	-0.03	0.34
251	SEC14L5	NM_014692	-0.03	0.34
252	SV2B	NM_001167580	-0.03	0.24
253	BSN	NM_003458	-0.03	0.16
254	RLIM	NM_016120	-0.03	0.25
255	RASSF6	NM_177532	-0.03	< 0.1
256	IQSEC1	NM_001134382	-0.03	0.11
257	FNDC5	NM_001171940	-0.03	0.26
258	LASP1	NM_006148	-0.02	0.36
259	MARK2	NM_001039469	-0.02	0.20
260	KLF13	NM_015995	-0.02	0.11

261	UCK2	NM_012474	-0.02	0.11
262	ESRRG	NM_001134285	-0.02	0.11
263	KCNJ10	NM_002241	-0.02	0.11
264	TMEM127	NM_001193304	-0.02	0.11
265	FAM123B	NM_152424	-0.02	0.35
266	KCNK10	NM_021161	-0.02	0.29
267	LSAMP	NM_002338	-0.02	0.29
268	FGD6	NM_018351	-0.02	0.15
269	IGF1R	NM_000875	-0.01	0.26
270	TNRC6C	NM_001142640	-0.01	0.26
271	DGKB	NM_004080	-0.01	0.26
272	EPB41	NM_001166005	-0.01	0.26
273	MPPED1	NM_001044370	-0.01	0.26
274	PTPN14	NM_005401	-0.01	0.26
275	SOX6	NM_001145811	-0.01	0.26
276	SESTD1	NM_178123	-0.01	0.26
277	CASK	NM_001126054	-0.01	0.26
278	COX18	NM_173827	-0.01	0.26
279	MFSD6	NM_017694	N/A	< 0.1

**Supplemental Table 7: putative target genes for miR-143 based on TCGA data**

#	Entrez Gene ID	HGNC ID	rho	p.val
1	GALM	130589	-0.318	1.80E-05
2	GEMIN8P4	492303	-0.280	1.66E-04
3	SNHG1	23642	-0.280	1.72E-04
4	SNHG3	8420	-0.275	2.23E-04
5	C6orf125	84300	-0.269	3.04E-04
6	FLJ39653	202020	-0.266	3.67E-04
7	ZNF587	84914	-0.263	4.31E-04
8	BCL2L14	79370	-0.263	4.33E-04
9	LOC150197	150197	-0.258	5.15E-04
10	MYL5	4636	-0.258	5.49E-04
11	ZNF679	168417	-0.254	6.59E-04
12	BRDT	676	-0.253	6.89E-04
13	C1orf111	284680	-0.252	7.02E-04
14	UNC13B	10497	-0.252	7.50E-04
15	LOC100131726	100131726	-0.251	7.41E-04
16	LRRC16A	55604	-0.250	8.38E-04
17	MCM9	254394	-	8.68E-

			0.249	04
18	NCRNA00107	283981	- 0.248	9.07E- 04
19	CCHCR1	54535	- 0.247	9.30E- 04
20	WDR52	55779	- 0.247	9.63E- 04
21	GLB1L3	112937	- 0.247	9.34E- 04
22	SLC36A2	153201	- 0.246	9.80E- 04
23	LRRC66	339977	- 0.245	1.03E- 03
24	CORO2A	7464	- 0.243	1.13E- 03
25	RPS24	6229	- 0.242	1.23E- 03
26	RSPH1	89765	- 0.241	1.24E- 03
27	SNHG8	100093630	- 0.240	1.36E- 03
28	MAP3K13	9175	- 0.239	1.38E- 03
29	IQCC	55721	- 0.237	1.51E- 03
30	KIAA0319	9856	- 0.237	1.48E- 03
31	?	100133144	- 0.237	1.53E- 03
32	PLCH1	23007	- 0.237	1.54E- 03
33	GOLGB1	2804	- 0.235	1.72E- 03
34	C8orf39	55472	- 0.234	1.76E- 03

35	CXCL17	284340	- 0.233	1.77E- 03
36	RPL11	6135	- 0.232	1.96E- 03
37	LOC143666	143666	- 0.231	1.99E- 03
38	C1orf21	81563	- 0.231	2.05E- 03
39	MDN1	23195	- 0.230	2.12E- 03
40	DCDC2B	149069	- 0.226	2.53E- 03
41	ZBTB3	79842	- 0.225	2.61E- 03
42	HOXB6	3216	- 0.224	2.75E- 03
43	LOC442454	442454	- 0.224	2.80E- 03
44	ARHGAP32	9743	- 0.223	2.97E- 03
45	LOC401052	401052	- 0.222	3.02E- 03
46	ACPP	55	- 0.222	3.04E- 03
47	CHD7	55636	- 0.221	3.20E- 03
48	TPR	7175	- 0.221	3.22E- 03
49	SNORD90	692206	- 0.221	3.18E- 03
50	CTRC	11330	- 0.220	3.23E- 03
51	CSMD3	114788	- 0.219	3.45E- 03
52	GAS5	60674	-	3.57E-

			0.218	03
53	C8orf44	56260	- 0.218	3.68E- 03
54	DYDC1	143241	- 0.217	3.73E- 03
55	CUZD1	50624	- 0.217	3.78E- 03
56	LOC146880	146880	- 0.216	3.91E- 03
57	C2CD3	26005	- 0.216	3.97E- 03
58	TSC1	7248	- 0.216	3.99E- 03
59	HMBS	3145	- 0.216	4.02E- 03
60	PLEKHH1	57475	- 0.215	4.10E- 03
61	RPL34	6164	- 0.215	4.13E- 03
62	C11orf48	79081	- 0.215	4.13E- 03
63	FXVD3	5349	- 0.215	4.16E- 03
64	ASMT	438	- 0.215	4.09E- 03
65	GCNT7	140687	- 0.214	4.24E- 03
66	COX6C	1345	- 0.213	4.43E- 03
67	ARHGEF38	54848	- 0.213	4.47E- 03
68	NBPF7	343505	- 0.212	4.56E- 03
69	IVNS1ABP	10625	- 0.212	4.76E- 03

70	ACP6	51205	- 0.212	4.76E- 03
71	MORN1	79906	- 0.211	4.82E- 03
72	CASP5	838	- 0.211	4.82E- 03
73	DKFZP686I15217	401232	- 0.211	4.88E- 03
74	NCRNA00167	440072	- 0.210	4.94E- 03
75	RPL37A	6168	- 0.210	5.04E- 03
76	CYP4Z1	199974	- 0.210	5.03E- 03
77	CTTN	2017	- 0.210	5.16E- 03
78	PPARA	5465	- 0.210	5.17E- 03
79	ZNF692	55657	- 0.210	5.18E- 03
80	C12orf27	283460	- 0.209	5.22E- 03
81	C11orf49	79096	- 0.209	5.41E- 03
82	SNHG5	387066	- 0.208	5.56E- 03
83	RBM6	10180	- 0.207	5.72E- 03
84	C1orf126	200197	- 0.207	5.81E- 03
85	ARL16	339231	- 0.207	5.81E- 03
86	GUSBL1	387036	- 0.207	5.86E- 03
87	C2orf72	257407	-	5.93E-

			0.206	03
88	RPS10P7	376693	- 0.206	5.96E- 03
89	RPS17	6218	- 0.206	6.11E- 03
90	BARX2	8538	- 0.205	6.19E- 03
91	UQCRH	7388	- 0.205	6.20E- 03
92	BMS1	9790	- 0.205	6.36E- 03
93	PPEF2	5470	- 0.205	6.30E- 03
94	NANOS1	340719	- 0.204	6.41E- 03
95	CYP4Z2P	163720	- 0.204	6.39E- 03
96	LOC100132832	100132832	- 0.204	6.53E- 03
97	DNAJC5G	285126	- 0.204	6.47E- 03
98	SNTN	132203	- 0.204	6.52E- 03
99	TAS2R4	50832	- 0.203	6.61E- 03
100	RPL7	6129	- 0.203	6.74E- 03
101	HOXB5	3215	- 0.203	6.90E- 03
102	SNORA66	26782	- 0.202	6.88E- 03
103	INADL	10207	- 0.201	7.25E- 03
104	C2CD4B	388125	- 0.201	7.27E- 03



105	KCNK6	9424	- 0.201	7.27E- 03
106	KCNQ1OT1	10984	- 0.201	7.29E- 03
107	RAVER2	55225	- 0.201	7.31E- 03
108	SARS2	54938	- 0.201	7.37E- 03
109	RASSF7	8045	- 0.201	7.46E- 03
110	KIAA1530	57654	- 0.201	7.48E- 03
111	SPDYE7P	441251	- 0.200	7.54E- 03
112	FMO6P	388714	- 0.200	7.52E- 03
113	LOC645676	645676	- 0.200	7.63E- 03
114	CDK5RAP2	55755	- 0.200	7.71E- 03
115	SLC26A6	65010	- 0.200	7.78E- 03
116	RG9MTD3	158234	- 0.199	8.04E- 03
117	TBX3	6926	- 0.199	8.12E- 03
118	METTL3	56339	- 0.199	8.12E- 03
119	ZNF169	169841	- 0.199	8.14E- 03
120	FAM24B	196792	- 0.198	8.34E- 03
121	FAM186A	121006	- 0.197	8.46E- 03
122	SNORA27	619499	-	8.52E-

			0.197	03
123	MS4A10	341116	- 0.197	8.65E- 03
124	KIFC2	90990	- 0.197	8.67E- 03
125	SIM2	6493	- 0.197	8.72E- 03
126	LOC100131193	100131193	- 0.196	8.97E- 03
127	SNHG12	85028	- 0.196	9.04E- 03
128	LOC100129534	100129534	- 0.195	9.13E- 03
129	RPL23P8	222901	- 0.195	9.27E- 03
130	MYO18A	399687	- 0.195	9.39E- 03
131	PIGZ	80235	- 0.195	9.42E- 03
132	SMPD2	6610	- 0.195	9.48E- 03
133	TIGD1	200765	- 0.195	9.53E- 03
134	GEMIN7	79760	- 0.194	9.64E- 03
135	ANKZF1	55139	- 0.194	9.64E- 03
136	PRICKLE4	29964	- 0.194	9.64E- 03
137	LOC115110	115110	- 0.194	9.68E- 03
138	MGC16384	114130	- 0.194	9.61E- 03
139	SPAG5	10615	- 0.194	9.79E- 03

140	TTC39A	22996	- 0.194	9.85E- 03
141	C20orf106	200232	- 0.194	9.78E- 03
142	KIF9	64147	- 0.194	9.89E- 03
143	SNORA61	677838	- 0.194	9.82E- 03
144	SOD1	6647	- 0.193	1.01E- 02
145	NBR2	10230	- 0.193	1.02E- 02
146	MAP3K9	4293	- 0.193	1.02E- 02
147	NSUN7	79730	- 0.193	1.03E- 02
148	LOC100131434	100131434	- 0.192	1.04E- 02
149	NANOG	79923	- 0.192	1.04E- 02
150	TBC1D3	729873	- 0.192	1.05E- 02
151	LOC145837	145837	- 0.192	1.05E- 02
152	FAM106A	80039	- 0.192	1.05E- 02
153	CEACAM20	125931	- 0.192	1.05E- 02
154	CELSR3	1951	- 0.191	1.08E- 02
155	CCNO	10309	- 0.191	1.08E- 02
156	NHSL1	57224	- 0.191	1.11E- 02
157	GPRC5D	55507	-	1.10E-

			0.191	02
158	PLEKHA6	22874	- 0.190	1.15E- 02
159	NSUN5P2	260294	- 0.190	1.15E- 02
160	LOC157381	157381	- 0.190	1.15E- 02
161	MAPK15	225689	- 0.189	1.17E- 02
162	LOC284232	284232	- 0.189	1.18E- 02
163	SLC44A3	126969	- 0.189	1.18E- 02
164	RABGGTB	5876	- 0.189	1.18E- 02
165	C11orf90	387804	- 0.189	1.19E- 02
166	ACOT13	55856	- 0.189	1.21E- 02
167	IQCH	64799	- 0.188	1.22E- 02
168	LOC147727	147727	- 0.188	1.23E- 02
169	QPCTL	54814	- 0.187	1.27E- 02
170	BMS1P5	399761	- 0.187	1.27E- 02
171	NBAS	51594	- 0.187	1.27E- 02
172	STYK1	55359	- 0.187	1.27E- 02
173	ZYG11A	440590	- 0.187	1.28E- 02
174	C4orf19	55286	- 0.187	1.28E- 02

175	KIAA0368	23392	- 0.187	1.28E- 02
176	SLC10A5	347051	- 0.187	1.28E- 02
177	EPS8L3	79574	- 0.187	1.29E- 02
178	GSDMB	55876	- 0.187	1.30E- 02
179	SIK2	23235	- 0.187	1.30E- 02
180	CNPY1	285888	- 0.186	1.29E- 02
181	C17orf86	654434	- 0.186	1.31E- 02
182	SPDYE5	442590	- 0.186	1.33E- 02
183	POU2F1	5451	- 0.186	1.33E- 02
184	MSX2P1	55545	- 0.186	1.34E- 02
185	HSPC072	29075	- 0.186	1.34E- 02
186	C11orf65	160140	- 0.186	1.34E- 02
187	NAA40	79829	- 0.185	1.36E- 02
188	UBQLN4	56893	- 0.185	1.37E- 02
189	SNORA24	677809	- 0.185	1.36E- 02
190	ZNF432	9668	- 0.185	1.37E- 02
191	AFM	173	- 0.185	1.37E- 02
192	CARD14	79092	-	1.39E-

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193	TNIK	23043	- 0.184	1.41E- 02
194	AOX2P	344454	- 0.184	1.43E- 02
195	ATP5G1	516	- 0.184	1.45E- 02
196	SLC29A2	3177	- 0.184	1.45E- 02
197	DPPA2	151871	- 0.183	1.45E- 02
198	EPN3	55040	- 0.183	1.46E- 02
199	C22orf30	253143	- 0.183	1.48E- 02
200	OR1L8	138881	- 0.183	1.50E- 02
201	TADA2A	6871	- 0.183	1.51E- 02
202	EFCAB4A	283229	- 0.183	1.51E- 02
203	C16orf3	750	- 0.182	1.51E- 02
204	SURF6	6838	- 0.182	1.52E- 02
205	RNF183	138065	- 0.182	1.52E- 02
206	GAS2L3	283431	- 0.182	1.53E- 02
207	DDX31	64794	- 0.182	1.53E- 02
208	MCTP2	55784	- 0.182	1.53E- 02
209	PSPC1	55269	- 0.182	1.55E- 02

210	GLB1L2	89944	- 0.182	1.55E- 02
211	DKFZp686O24166	374383	- 0.182	1.55E- 02
212	LRRIQ4	344657	- 0.182	1.54E- 02
213	ADAM3A	1587	- 0.182	1.57E- 02
214	USH1C	10083	- 0.181	1.58E- 02
215	LOC100272217	100272217	- 0.181	1.58E- 02
216	GPRIN3	285513	- 0.181	1.60E- 02
217	FHIT	2272	- 0.181	1.61E- 02
218	LCOR	84458	- 0.181	1.62E- 02
219	ZFYVE27	118813	- 0.181	1.62E- 02
220	PPP1R3E	90673	- 0.180	1.64E- 02
221	FCAMR	83953	- 0.180	1.63E- 02
222	HOXB8	3218	- 0.180	1.65E- 02
223	COX7C	1350	- 0.180	1.66E- 02
224	UQCRB	7381	- 0.180	1.66E- 02
225	TSEN34	79042	- 0.180	1.66E- 02
226	SULT1C2	6819	- 0.180	1.67E- 02
227	ITPR3	3710	-	1.67E-

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228	CDC42BPG	55561	- 0.180	1.67E- 02
229	RPS23	6228	- 0.180	1.69E- 02
230	SERGEF	26297	- 0.180	1.69E- 02
231	RPL31	6160	- 0.180	1.69E- 02
232	MSGN1	343930	- 0.179	1.70E- 02
233	FGF8	2253	- 0.179	1.70E- 02
234	DET1	55070	- 0.179	1.71E- 02
235	C22orf27	150291	- 0.179	1.72E- 02
236	LOC338651	338651	- 0.179	1.72E- 02
237	TACC2	10579	- 0.179	1.73E- 02
238	AFMID	125061	- 0.179	1.74E- 02
239	DPP4	1803	- 0.179	1.75E- 02
240	TRIM10	10107	- 0.179	1.75E- 02
241	ZFP62	643836	- 0.179	1.76E- 02
242	APOBEC1	339	- 0.178	1.76E- 02
243	SNORD53	26796	- 0.178	1.75E- 02
244	LOC90246	90246	- 0.178	1.76E- 02



245	METTL12	751071	- 0.178	1.77E- 02
246	NPNT	255743	- 0.178	1.77E- 02
247	N4BP2	55728	- 0.178	1.78E- 02
248	CENPF	1063	- 0.178	1.78E- 02
249	S100A7	6278	- 0.178	1.78E- 02
250	LOC126536	126536	- 0.178	1.78E- 02
251	C9orf68	55064	- 0.178	1.80E- 02
252	SETDB1	9869	- 0.178	1.80E- 02
253	PLCB3	5331	- 0.178	1.80E- 02
254	ACYP1	97	- 0.178	1.80E- 02
255	TMPRSS11BNL	401136	- 0.178	1.80E- 02
256	BTBD8	284697	- 0.177	1.81E- 02
257	C2orf83	56918	- 0.177	1.82E- 02
258	TEP1	7011	- 0.177	1.84E- 02
259	RPL32P3	132241	- 0.177	1.85E- 02
260	TMCO6	55374	- 0.177	1.85E- 02
261	UQCRHL	440567	- 0.177	1.86E- 02
262	HIATL2	84278	-	1.88E-

			0.177	02
263	LHX4	89884	- 0.177	1.87E- 02
264	C1orf91	56063	- 0.176	1.90E- 02
265	GMDS	2762	- 0.176	1.91E- 02
266	SFRS15	57466	- 0.176	1.92E- 02
267	KIAA1984	84960	- 0.176	1.93E- 02
268	HRNR	388697	- 0.176	1.92E- 02
269	ZNF784	147808	- 0.175	1.96E- 02
270	LOC400752	400752	- 0.175	1.96E- 02
271	ANKHD1- EIF4EBP3	404734	- 0.175	1.98E- 02
272	ACACA	31	- 0.175	1.99E- 02
273	LOC440944	440944	- 0.175	1.99E- 02
274	CATSPER2	117155	- 0.175	1.99E- 02
275	ZBTB8B	728116	- 0.175	1.99E- 02
276	ZNF488	118738	- 0.175	1.99E- 02
277	CALML4	91860	- 0.175	2.00E- 02
278	ZNF789	285989	- 0.175	2.02E- 02
279	MAGI3	260425	- 0.174	2.03E- 02

280	PTPRH	5794	- 0.174	2.04E- 02
281	PAN2	9924	- 0.174	2.04E- 02
282	C14orf156	81892	- 0.174	2.04E- 02
283	VPS52	6293	- 0.174	2.05E- 02
284	PABPC1L2A	340529	- 0.174	2.06E- 02
285	OXER1	165140	- 0.174	2.07E- 02
286	TOMM20L	387990	- 0.174	2.07E- 02
287	FAM136B	387071	- 0.174	2.07E- 02
288	C4orf10	317648	- 0.174	2.08E- 02
289	CCL15	6359	- 0.174	2.08E- 02
290	FDPSL2A	619190	- 0.174	2.09E- 02
291	GCC2	9648	- 0.173	2.10E- 02
292	HEMK1	51409	- 0.173	2.13E- 02
293	LOC80054	80054	- 0.173	2.13E- 02
294	ZNF417	147687	- 0.173	2.15E- 02
295	MLL	4297	- 0.173	2.15E- 02
296	USP24	23358	- 0.173	2.17E- 02
297	C1orf159	54991	-	2.19E-

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298	LOC729609	729609	- 0.172	2.18E- 02
299	FKBPL	63943	- 0.172	2.19E- 02
300	TMEM143	55260	- 0.172	2.19E- 02
301	PTH	5741	- 0.172	2.19E- 02
302	LOC648691	648691	- 0.172	2.20E- 02
303	DUXA	503835	- 0.172	2.21E- 02
304	?	645851	- 0.172	2.21E- 02
305	C3orf27	23434	- 0.172	2.22E- 02
306	ALPK1	80216	- 0.172	2.24E- 02
307	MKI67	4288	- 0.172	2.24E- 02
308	BRS3	680	- 0.172	2.23E- 02
309	CKAP5	9793	- 0.171	2.26E- 02
310	ZXDC	79364	- 0.171	2.26E- 02
311	SNHG10	283596	- 0.171	2.26E- 02
312	HDHD3	81932	- 0.171	2.27E- 02
313	RBM5	10181	- 0.171	2.27E- 02
314	RGPD1	400966	- 0.171	2.28E- 02

315	UBXN7	26043	- 0.171	2.28E- 02
316	BMS1P4	729096	- 0.171	2.29E- 02
317	ZNF311	282890	- 0.171	2.29E- 02
318	ACRV1	56	- 0.171	2.30E- 02
319	LIMCH1	22998	- 0.171	2.32E- 02
320	CDK5RAP3	80279	- 0.170	2.34E- 02
321	LOC642852	642852	- 0.170	2.36E- 02
322	CDK11A	728642	- 0.170	2.36E- 02
323	AGBL4	84871	- 0.170	2.36E- 02
324	ZNF552	79818	- 0.170	2.37E- 02
325	DDX11L2	84771	- 0.170	2.36E- 02
326	S100P	6286	- 0.170	2.38E- 02
327	SF3B1	23451	- 0.170	2.38E- 02
328	DSC1	1823	- 0.170	2.38E- 02
329	GTF3C6	112495	- 0.170	2.40E- 02
330	LOC100129716	100129716	- 0.170	2.40E- 02
331	SPTAN1	6709	- 0.170	2.40E- 02
332	ZNF749	388567	-	2.42E-

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333	FRK	2444	- 0.169	2.43E- 02
334	USP54	159195	- 0.169	2.45E- 02
335	PDDC1	347862	- 0.169	2.46E- 02
336	RSPH6A	81492	- 0.169	2.45E- 02
337	NUP98	4928	- 0.169	2.47E- 02
338	PLCE1	51196	- 0.169	2.47E- 02
339	DNAH7	56171	- 0.169	2.48E- 02
340	TLN2	83660	- 0.169	2.49E- 02
341	SFI1	9814	- 0.169	2.50E- 02
342	LOC285359	285359	- 0.168	2.53E- 02
343	LOC285419	285419	- 0.168	2.53E- 02
344	DYX1C1	161582	- 0.168	2.55E- 02
345	RPS12	6206	- 0.168	2.55E- 02
346	TIAF1	9220	- 0.168	2.55E- 02
347	TMC1	117531	- 0.168	2.55E- 02
348	PDXDC2	283970	- 0.168	2.57E- 02
349	SLC35E2	728661	- 0.168	2.57E- 02

350	HNRNPA3P1	10151	- 0.168	2.58E- 02
351	C14orf79	122616	- 0.168	2.59E- 02
352	LOC643955	643955	- 0.168	2.58E- 02
353	LOC642826	642826	- 0.167	2.61E- 02
354	KIAA1244	57221	- 0.167	2.61E- 02
355	LOC729603	729603	- 0.167	2.61E- 02
356	OTUD3	23252	- 0.167	2.61E- 02
357	LENG9	94059	- 0.167	2.62E- 02
358	GALE	2582	- 0.167	2.62E- 02
359	VRK3	51231	- 0.167	2.63E- 02
360	LRRC37A4	55073	- 0.167	2.63E- 02
361	?	652919	- 0.167	2.63E- 02
362	CELF1	10658	- 0.167	2.64E- 02
363	CLDND2	125875	- 0.167	2.64E- 02
364	COX7B2	170712	- 0.167	2.64E- 02
365	ZNF479	90827	- 0.167	2.64E- 02
366	NOS2	4843	- 0.167	2.66E- 02
367	RBM1B	378948	-	2.65E-

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368	UBR2	23304	- 0.167	2.68E- 02
369	LOC100133331	100133331	- 0.166	2.69E- 02
370	RNF168	165918	- 0.166	2.71E- 02
371	NASP	4678	- 0.166	2.71E- 02
372	C3orf62	375341	- 0.166	2.72E- 02
373	LOC648740	648740	- 0.166	2.73E- 02
374	OR7E156P	283491	- 0.166	2.74E- 02
375	ACCS	84680	- 0.166	2.74E- 02
376	C6orf124	653483	- 0.166	2.74E- 02
377	SMCR5	140771	- 0.166	2.74E- 02
378	RNF214	257160	- 0.166	2.77E- 02
379	NOP14	8602	- 0.166	2.77E- 02
380	TEC	7006	- 0.166	2.77E- 02
381	SPTLC2	9517	- 0.166	2.78E- 02
382	HMG3	9324	- 0.165	2.79E- 02
383	WARS2	10352	- 0.165	2.79E- 02
384	ADM2	79924	- 0.165	2.79E- 02



385	FLJ42627	645644	- 0.165	2.79E- 02
386	OR52R1	119695	- 0.165	2.78E- 02
387	XPO5	57510	- 0.165	2.80E- 02
388	SPATA24	202051	- 0.165	2.81E- 02
389	NDUFA8	4702	- 0.165	2.83E- 02
390	HTR1D	3352	- 0.165	2.84E- 02
391	PKDREJ	10343	- 0.165	2.83E- 02
392	C6orf134	79969	- 0.165	2.85E- 02
393	RFX4	5992	- 0.165	2.86E- 02
394	C15orf17	57184	- 0.164	2.88E- 02
395	CCDC30	728621	- 0.164	2.89E- 02
396	TACC3	10460	- 0.164	2.91E- 02
397	SLC14A2	8170	- 0.164	2.94E- 02
398	ZNF226	7769	- 0.164	2.96E- 02
399	IQCB1	9657	- 0.163	2.98E- 02
400	TROAP	10024	- 0.163	2.99E- 02
401	PCNT	5116	- 0.163	2.99E- 02
402	DPAGT1	1798	-	3.00E-

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403	NSD1	64324	- 0.163	3.01E- 02
404	MSH5	4439	- 0.163	3.01E- 02
405	CCDC56	28958	- 0.163	3.02E- 02
406	SPTBN1	6711	- 0.163	3.03E- 02
407	C1orf104	284618	- 0.163	3.04E- 02
408	C6orf132	647024	- 0.163	3.04E- 02
409	AGAP5	729092	- 0.163	3.04E- 02
410	PDXDC1	23042	- 0.163	3.04E- 02
411	LOC100133612	100133612	- 0.163	3.05E- 02
412	C2orf68	388969	- 0.163	3.06E- 02
413	PEX7	5191	- 0.163	3.06E- 02
414	KIF13A	63971	- 0.163	3.07E- 02
415	C6orf208	80069	- 0.163	3.06E- 02
416	RPS27A	6233	- 0.162	3.08E- 02
417	EIF4A2	1974	- 0.162	3.09E- 02
418	OSCP1	127700	- 0.162	3.09E- 02
419	SNORD12B	100113393	- 0.162	3.08E- 02

420	KIAA0114	57291	- 0.162	3.10E- 02
421	TRIM66	9866	- 0.162	3.10E- 02
422	ACIN1	22985	- 0.162	3.10E- 02
423	NCRNA00095	283932	- 0.162	3.11E- 02
424	KRTAP3-3	85293	- 0.162	3.13E- 02
425	ZNF620	253639	- 0.162	3.14E- 02
426	TAS2R41	259287	- 0.162	3.14E- 02
427	LETMD1	25875	- 0.162	3.16E- 02
428	CBX8	57332	- 0.162	3.17E- 02
429	SETD4	54093	- 0.162	3.17E- 02
430	PPIP5K1	9677	- 0.162	3.18E- 02
431	CYP2R1	120227	- 0.161	3.19E- 02
432	F11R	50848	- 0.161	3.20E- 02
433	INSR	3643	- 0.161	3.20E- 02
434	C14orf128	84837	- 0.161	3.21E- 02
435	C14orf165	414767	- 0.161	3.22E- 02
436	SSU72	29101	- 0.161	3.23E- 02
437	CASP10	843	-	3.25E-

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438	DGAT1	8694	- 0.161	3.27E- 02
439	FAM138D	677784	- 0.160	3.29E- 02
440	LOC646851	646851	- 0.160	3.31E- 02
441	NIPAL1	152519	- 0.160	3.31E- 02
442	C9orf173	441476	- 0.160	3.31E- 02
443	DEPDC5	9681	- 0.160	3.33E- 02
444	AFG3L2	10939	- 0.160	3.33E- 02
445	NFRKB	4798	- 0.160	3.34E- 02
446	MYO7B	4648	- 0.160	3.35E- 02
447	C10orf110	55853	- 0.160	3.35E- 02
448	PABPN1	8106	- 0.160	3.35E- 02
449	ERCC6	2074	- 0.160	3.36E- 02
450	C8orf30A	51236	- 0.160	3.36E- 02
451	DSG4	147409	- 0.160	3.35E- 02
452	CMTM4	146223	- 0.160	3.36E- 02
453	ZNF833	401898	- 0.160	3.37E- 02
454	SLC9A4	389015	- 0.160	3.37E- 02

455	IAPP	3375	- 0.160	3.38E- 02
456	C17orf93	360205	- 0.160	3.38E- 02
457	TBC1D3H	729877	- 0.160	3.40E- 02
458	KCNJ3	3760	- 0.159	3.40E- 02
459	C8orf75	619351	- 0.159	3.40E- 02
460	C18orf16	147429	- 0.159	3.41E- 02
461	PPP1R1B	84152	- 0.159	3.41E- 02
462	MAS1	4142	- 0.159	3.40E- 02
463	RWDD2A	112611	- 0.159	3.41E- 02
464	LOC100190938	100190938	- 0.159	3.41E- 02
465	CHCHD8	51287	- 0.159	3.42E- 02
466	TM4SF20	79853	- 0.159	3.42E- 02
467	EXOSC2	23404	- 0.159	3.42E- 02
468	LIAS	11019	- 0.159	3.43E- 02
469	MYSM1	114803	- 0.159	3.45E- 02
470	GPR125	166647	- 0.159	3.45E- 02
471	SAMD12	401474	- 0.159	3.45E- 02
472	LGR4	55366	-	3.46E-

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473	FOXO3B	2310	- 0.159	3.47E- 02
474	GPR110	266977	- 0.159	3.46E- 02
475	TBC1D3C	414060	- 0.159	3.48E- 02
476	PFDN6	10471	- 0.159	3.48E- 02
477	BTBD18	643376	- 0.159	3.47E- 02
478	C1orf74	148304	- 0.159	3.48E- 02
479	KIAA1109	84162	- 0.159	3.48E- 02
480	SCAND2	54581	- 0.159	3.49E- 02
481	ZKSCAN3	80317	- 0.159	3.50E- 02
482	CDH3	1001	- 0.158	3.52E- 02
483	LOC93622	93622	- 0.158	3.53E- 02
484	LOC730101	730101	- 0.158	3.53E- 02
485	SSRP1	6749	- 0.158	3.53E- 02
486	SRRM2	23524	- 0.158	3.54E- 02
487	ADAT2	134637	- 0.158	3.55E- 02
488	LOC400891	400891	- 0.158	3.55E- 02
489	SERPINB6	5269	- 0.158	3.55E- 02

490	ATP5O	539	- 0.158	3.56E- 02
491	SAMD7	344658	- 0.158	3.56E- 02
492	AMY2B	280	- 0.158	3.58E- 02
493	RAG1AP1	55974	- 0.158	3.58E- 02
494	XKR9	389668	- 0.158	3.59E- 02
495	NMNAT1	64802	- 0.158	3.60E- 02
496	AIM1	202	- 0.158	3.61E- 02
497	KIAA0319L	79932	- 0.158	3.62E- 02
498	LRIG2	9860	- 0.158	3.62E- 02
499	GPR128	84873	- 0.158	3.64E- 02
500	RALGPS1	9649	- 0.157	3.64E- 02
501	YEATS2	55689	- 0.157	3.65E- 02
502	TEDDM1	127670	- 0.157	3.65E- 02
503	INTS3	65123	- 0.157	3.66E- 02
504	GUCA1B	2979	- 0.157	3.67E- 02
505	SNAR-I	100170222	- 0.157	3.66E- 02
506	ZNF829	374899	- 0.157	3.67E- 02
507	CUTA	51596	-	3.67E-

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508	LOC388152	388152	-	3.68E-02
509	HOXB13	10481	0.157	-
510	XDH	7498	0.157	3.71E-02
511	NSUN5P1	155400	0.157	-
512	ZNF841	284371	0.157	3.72E-02
513	NANS	54187	0.156	-
514	PNKD	25953	0.156	3.75E-02
515	ZSCAN16	80345	0.156	-
516	AGR2	10551	0.156	3.77E-02
517	CEP192	55125	0.156	-
518	MED19	219541	0.156	3.78E-02
519	SNORD4A	26773	0.156	-
520	C3orf35	339883	0.156	3.80E-02
521	C4orf12	404201	0.156	-
522	DTX4	23220	0.156	3.82E-02
523	HMG2	3151	0.156	-
524	NKX6-2	84504	0.155	3.86E-02
				3.88E-02



525	FOXO3	2309	- 0.155	3.90E- 02
526	ENOSF1	55556	- 0.155	3.90E- 02
527	TFRC	7037	- 0.155	3.91E- 02
528	C6orf26	401251	- 0.155	3.91E- 02
529	NPHS1	4868	- 0.155	3.91E- 02
530	RGPD3	653489	- 0.155	3.92E- 02
531	ZNF16	7564	- 0.155	3.93E- 02
532	KIF24	347240	- 0.155	3.96E- 02
533	SECISBP2	79048	- 0.155	3.97E- 02
534	MYL10	93408	- 0.155	3.96E- 02
535	TCEB3B	51224	- 0.155	3.97E- 02
536	LOC148413	148413	- 0.155	3.98E- 02
537	ODF2	4957	- 0.155	3.99E- 02
538	CDRT4	284040	- 0.155	3.99E- 02
539	ZBTB5	9925	- 0.155	3.99E- 02
540	MFSD3	113655	- 0.155	4.01E- 02
541	PXMP2	5827	- 0.154	4.01E- 02
542	SERHL	94009	-	4.02E-

			0.154	02
543	OSR2	116039	- 0.154	4.03E- 02
544	C4orf26	152816	- 0.154	4.02E- 02
545	DDB1	1642	- 0.154	4.05E- 02
546	CLPS	1208	- 0.154	4.04E- 02
547	WNK4	65266	- 0.154	4.06E- 02
548	KAZALD1	81621	- 0.154	4.07E- 02
549	HOOK2	29911	- 0.154	4.07E- 02
550	ANKRD36B	57730	- 0.154	4.09E- 02
551	RGPD8	727851	- 0.154	4.11E- 02
552	SNORD74	619498	- 0.154	4.10E- 02
553	ECHDC2	55268	- 0.154	4.11E- 02
554	TSTD1	100131187	- 0.154	4.11E- 02
555	NAPSA	9476	- 0.154	4.11E- 02
556	NCRNA00093	100188954	- 0.154	4.12E- 02
557	SNORD88A	692202	- 0.154	4.12E- 02
558	KDM1A	23028	- 0.154	4.14E- 02
559	FEZF1	389549	- 0.153	4.14E- 02

560	C21orf62	56245	- 0.153	4.16E- 02
561	ATP5L	10632	- 0.153	4.17E- 02
562	CARD16	114769	- 0.153	4.17E- 02
563	SNORA55	677834	- 0.153	4.16E- 02
564	RGPD4	285190	- 0.153	4.17E- 02
565	SIDT1	54847	- 0.153	4.18E- 02
566	TMEM125	128218	- 0.153	4.19E- 02
567	C17orf77	146723	- 0.153	4.19E- 02
568	HRSP12	10247	- 0.153	4.20E- 02
569	ABCA13	154664	- 0.153	4.21E- 02
570	SNORD18A	595098	- 0.153	4.21E- 02
571	TTC17	55761	- 0.153	4.22E- 02
572	TP53AIP1	63970	- 0.153	4.21E- 02
573	STX3	6809	- 0.153	4.23E- 02
574	SLC25A27	9481	- 0.153	4.23E- 02
575	IL22	50616	- 0.153	4.22E- 02
576	C21orf58	54058	- 0.152	4.30E- 02
577	FAM157A	728262	-	4.30E-

			0.152	02
578	NME6	10201	- 0.152	4.30E- 02
579	DMBT1	1755	- 0.152	4.30E- 02
580	POLQ	10721	- 0.152	4.32E- 02
581	TBR1	10716	- 0.152	4.35E- 02
582	PNN	5411	- 0.152	4.36E- 02
583	LOC127841	127841	- 0.152	4.37E- 02
584	C1orf226	400793	- 0.152	4.38E- 02
585	AGBL3	340351	- 0.152	4.37E- 02
586	TIGD2	166815	- 0.152	4.39E- 02
587	CTH	1491	- 0.152	4.39E- 02
588	RP1-177G6.2	286411	- 0.152	4.40E- 02
589	STAG3L3	442578	- 0.152	4.42E- 02
590	AGBL2	79841	- 0.152	4.41E- 02
591	PGM3	5238	- 0.151	4.43E- 02
592	PGAP1	80055	- 0.151	4.43E- 02
593	ZDHHC8P1	150244	- 0.151	4.44E- 02
594	OR1M1	125963	- 0.151	4.43E- 02

595	SLC30A9	10463	- 0.151	4.45E- 02
596	GPR126	57211	- 0.151	4.46E- 02
597	SDR9C7	121214	- 0.151	4.46E- 02
598	CCDC36	339834	- 0.151	4.49E- 02
599	KIAA1875	340390	- 0.151	4.49E- 02
600	TTC29	83894	- 0.151	4.48E- 02
601	SNHG4	724102	- 0.151	4.50E- 02
602	GAK	2580	- 0.151	4.51E- 02
603	RGPD6	729540	- 0.151	4.51E- 02
604	KRTAP5-1	387264	- 0.151	4.51E- 02
605	LNX1	84708	- 0.151	4.52E- 02
606	ZNF224	7767	- 0.151	4.53E- 02
607	LOC285501	285501	- 0.151	4.53E- 02
608	IDH1	3417	- 0.151	4.55E- 02
609	GNG13	51764	- 0.150	4.56E- 02
610	TTC31	64427	- 0.150	4.58E- 02
611	ZNF565	147929	- 0.150	4.58E- 02
612	NBPF4	148545	-	4.58E-

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613	FAM74A4	401508	- 0.150	4.58E- 02
614	MLH3	27030	- 0.150	4.59E- 02
615	CNFN	84518	- 0.150	4.60E- 02
616	FABP5	2171	- 0.150	4.62E- 02
617	PRR15L	79170	- 0.150	4.62E- 02
618	FUT4	2526	- 0.150	4.62E- 02
619	GLI4	2738	- 0.150	4.62E- 02
620	ASCC3	10973	- 0.150	4.62E- 02
621	LRTOMT	220074	- 0.150	4.62E- 02
622	CDSN	1041	- 0.150	4.64E- 02
623	UAP1	6675	- 0.150	4.64E- 02
624	LOC642846	642846	- 0.150	4.64E- 02
625	SLC35A3	23443	- 0.150	4.65E- 02
626	ZDHHC5	25921	- 0.150	4.66E- 02
627	IARS	3376	- 0.150	4.66E- 02
628	TBC1D3G	654341	- 0.150	4.66E- 02
629	BOD1L	259282	- 0.150	4.67E- 02

630	CCDC64B	146439	- 0.150	4.67E- 02
631	GSX1	219409	- 0.150	4.66E- 02
632	CA13	377677	- 0.150	4.67E- 02
633	LYZL4	131375	- 0.150	4.66E- 02
634	KIAA0100	9703	- 0.150	4.68E- 02
635	UBR4	23352	- 0.150	4.69E- 02
636	CNKSR1	10256	- 0.150	4.69E- 02
637	LOC100128288	100128288	- 0.150	4.70E- 02
638	KIAA2018	205717	- 0.150	4.70E- 02
639	MCM3APAS	114044	- 0.150	4.71E- 02
640	C1orf64	149563	- 0.149	4.71E- 02
641	DOPEY2	9980	- 0.149	4.72E- 02
642	CCNI2	645121	- 0.149	4.73E- 02
643	CDH7	1005	- 0.149	4.72E- 02
644	ACOX3	8310	- 0.149	4.73E- 02
645	CDRT15	146822	- 0.149	4.74E- 02
646	COPG2	26958	- 0.149	4.75E- 02
647	PIK3C2B	5287	- 0.149	4.76E- 02

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648	LOC100132287	100132287	-	4.78E-02
649	KIAA1328	57536	0.149	-
650	LRRC56	115399	0.149	4.80E-02
651	LOC100133161	100133161	-	4.81E-02
652	KIAA0753	9851	0.149	-
653	EEF1G	1937	0.149	4.82E-02
654	RASEF	158158	0.149	-
655	LQK1	642946	0.149	4.82E-02
656	DHTKD1	55526	0.148	-
657	C1orf182	128229	0.148	4.83E-02
658	LOC153684	153684	0.148	-
659	C15orf28	80035	0.148	4.86E-02
660	RPS20	6224	0.148	-
661	TMPRSS7	344805	0.148	4.88E-02
662	SLC26A8	116369	0.148	-
663	TATDN1	83940	0.148	4.92E-02
664	C20orf70	140683	0.148	-



665	SF3B2	10992	- 0.148	4.99E- 02
666	ZNF700	90592	- 0.148	4.99E- 02
667	NBPF1	55672	- 0.148	4.99E- 02
668	IFT140	9742	- 0.148	5.00E- 02
669	RGPD5	84220	- 0.148	5.00E- 02