

# DNA Methylation Profiling of Blood Monocytes in Patients With Obesity Hypoventilation Syndrome

## Effect of Positive Airway Pressure Treatment

*Rene Cortese, PhD; Chunling Zhang, MSc; Riyue Bao, PhD; Jorge Andrade, PhD;  
Abdelnaby Khalyfa, PhD; Babak Mokhlesi, MD; and David Gozal, MD, FCCP*

CHEST 2016; 150(1):91-101

*Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.*

© 2016 AMERICAN COLLEGE OF CHEST PHYSICIANS. Reproduction of this article is prohibited without written permission from the American College of Chest Physicians. See online for more details. DOI: 10.1016/j.chest.2016.02.648

## **e-Appendix 1:** Detailed materials and methods used in this study

**Patient population and sample preparation.** Our inclusion criteria were age  $\geq 18$  and  $\leq 75$  years of age, diagnosis of OHS in the past 3 months but no initiation of PAP therapy, body mass index (BMI)  $\geq 30$  kg/m<sup>2</sup>, daytime partial pressure of arterial CO<sub>2</sub> (PaCO<sub>2</sub>)  $\geq 45$  mmHg and daytime pH  $>7.35$  from an arterial blood gas, presence of OSA with an apnea-hypopnea index (AHI)  $\geq 5$  events/h of sleep, and forced expiratory volume in 1 second (FEV<sub>1</sub>)/forced vital capacity (FVC)  $> 70\%$ . We excluded acutely ill and unstable patients, hospitalization for respiratory exacerbation  $< 6$  weeks prior to screening visit, and evidence of alkalosis (pH  $> 7.45$ ) on the arterial blood gas measurement. Between March 2012 and February 2014, 39 patients evaluated in the Sleep Disorders Clinic were referred to the University of Chicago research site for suspicion of OHS. Written informed consent was provided by all patients. Due to lack of hypercapnia on the screening baseline arterial blood gas (PaCO<sub>2</sub>  $< 45$  mmHg) eighteen subjects were excluded. Of the remaining 21 participants, 6 did not agree to undergo two venipunctures. Therefore, the final analytic cohort consisted of 15 patients (6 male and 9 female) with OHS who underwent two venipunctures and two measurements of arterial blood gases 6 weeks apart after being prescribed PAP therapy.

All of these patients had OSA (14 patients with severe OSA as indicated by a apnea-hypopnea index (AHI) pre-treatment  $> 30$  events/hour total sleep time, and 1 patient with mild OSA: AHI pre-treatment = 8). All patients were clinically evaluated by sleep specialists in the Sleep Disorders Center of the University of Chicago. Each participant underwent three in-laboratory polysomnograms (PSG): baseline PSG, PAP titration PSG and PSG after 6 weeks of home PAP therapy. The final 6-week PSG was performed while the patient was wearing their home prescribed PAP device. Bedtimes were from 10:00 pm-12:00 am until 7:00 am-9:00 am. Each PSG included 8 hours of recording. PSG (Nihon Kohden, Foothill Ranch, CA) included recordings of six electroencephalographic channels, bilateral electro-oculograms, chin and tibialis electromyogram, electrocardiogram, airflow by nasal pressure transducer and oronasal thermocouples, chest and abdominal wall motion by respiratory inductance plethysmography belts, and oxygen saturation by finger pulse oximeter. Transcutaneous CO<sub>2</sub> monitoring was performed during baseline and 6-week PSG. All PSGs were staged and scored according to the 2007 American Academy of Sleep Medicine Manual for the Scoring of Sleep and Related Events<sup>1</sup>. Apneas were defined as a reduction of airflow of at least 90% on the oronasal thermistor for at least 10 seconds (obstructive if respiratory effort was present and central if respiratory effort was absent). Hypopneas were scored if the magnitude of the signal decreased by at least 30% of the baseline amplitude of the nasal pressure transducer for at least 10 seconds, and were associated with a 4% or greater drop in oxygen saturation as measured by finger pulse oximetry. The total AHI was defined as the number of apneas and hypopneas per hour of sleep. OSA was defined as AHI  $\geq 5$ . Severity of OSA was measured by the AHI. A subject was

considered to have mild OSA if the AHI was 5-14, moderate OSA if the AHI was 15-29, and severe OSA if the AHI was  $\geq 30$ . PAP titration was performed following the American Academy of Sleep Medicine recommendations<sup>2,3</sup>.

Adherence to the treatment was monitored using smart card technology embedded in the PAP machines (average adherence among the complete patient cohort:  $5.45 \pm 1.37$  days/week used;  $88.9 \pm 15.3$  % of days used, with  $67.7 \pm 25.0$  % of days used  $> 4$  hours/night). In addition, co-existent diagnosis of hypertension (9/15 patients), T2DM (4/15 patients), congestive heart failure (4/15 patients) or dyslipidemia (3/15 patients) were also registered. Supplementary table S1 lists the demographic and clinical characteristics of these patients. All the participants provided written informed consent and the research protocol was approved by the research ethical board at the University of Chicago (protocol # 10-702-A-CR004). For each patient, blood was collected by venipuncture in the fasting state within 1 hour from awakening before start receiving PAP treatment (PRE- group), as well as after 6 weeks of treatment (POST-group). Both venipunctures were performed in the sleep laboratory after the patients awakened from the overnight in-laboratory polysomnogram. Peripheral blood mononuclear cells (PBMCs) were isolated using gradient centrifugation and the CD14+ monocytes fraction was isolated using the Milteny Biotec MACS magnetic cell separation system, as described elsewhere<sup>4</sup>. DNA was isolated from the isolated CD14+ monocytes using the DNeasy kit (Qiagen, Valencia, CA), according to manufacturer's instructions. DNA was quantified and quality assessed by absorbance measurement using Nanodrop (Thermo Scientific, Wilmington, DE) and DNA integrity was verified by agarose gel electrophoresis. Isolated DNA was stored at  $-20$  °C until use.

**Microarray-based DNA profiling.** DNA methylation profiles before and after treatment for the patients exhibiting the highest POST/PRE AHI ratios ( $n=6$ ) were assessed using a MeDIP-chip strategy. First,  $1.5$   $\mu\text{g}$  of fragmented DNA was immunoprecipitated using an antibody against 5-methylcytosine (Eurogentec-AnaSpec, Inc. Fremont, CA) following the MeDIP protocol<sup>5</sup>. Immunoprecipitated DNA was amplified using an adaptor mediated PCR strategy, as described elsewhere<sup>6</sup> and subsequently fragmented, biotin-labeled, and hybridized on Affymetrix GeneChip Human Promoter Array 1.0R (Affymetrix, Santa Clara, CA) and scanned, according to manufacturer's protocol. The array consisted of over 4.6 million probes tiled to interrogate over 25,000 human promoter regions. Probes in the microarray were tiled at an average resolution of 35 base pairs, as measured from the central position of adjacent 25-mer oligos, leaving a gap of approximately 10 base pairs between probes. Each promoter region covered approximately 7.5 kb upstream through 2.5 kb downstream of 5' transcription start sites. The array interrogates regions proximal to transcription start sites, covering approximately 59 percent of the annotated CpG islands (NCBI Build 34/hg16)

**Microarray data analysis.** The data set(s) supporting the results of this article is available in the NCBI's Gene Expression Omnibus (GEO) repository (Accession number: GSE73053)

Microarray data was processed as previously described <sup>7</sup>. In brief, raw data (.cel files) was managed using the Partek® Genomic Suite® Software, version 6.6 (Partek Inc., St. Louis, MO, USA). Data pre-processing consisted of probe sequence adjustment, Robust Multichip Averaging (RMA) <sup>8</sup> background correction, quantile normalization and log<sub>2</sub> transformation. The relationship between samples was examined by Multidimensional scaling (MDS) analysis. Normalized signals in the PRE and POST groups were compared using Analysis of Variance (ANOVA) and t-statistic were calculated for each probe. Regions of differential DNA methylation were identified using the Model-based Analysis of Tiling-arrays (MAT) <sup>9</sup> algorithm. A sliding window of fixed genomic length (500 bp) was applied and MAT score of each window was generated using the trimmed mean of probe t-statistics, which is calculated by taking the average of all probes within a window excluding 10% of the highest and lowest probes. Only regions containing more than 10 probes were considered for further analysis. Windows at p-value < 0.001 and absolute MAT scores >4 were considered as significant. Regions with positive and negative MAT scores represent hyper- and hypo-methylated regions in the POST group as compared to PRE, respectively. Regions supported by less than 80% of the probes were removed from further analysis. The probe locations were obtained from the array's annotation file and genome coordinates were updated to the GRCh37/hg19 build using the LiftOver tool at the UCSC genome browser. Promoter and gene associations were annotated comparing genomic coordinates against the RefSeq transcript annotation of human reference genome assembly. Networks and pathways significantly enriched in the genes of interest were identified through Ingenuity Pathways Analysis (IPA) (Ingenuity® Systems, [www.ingenuity.com](http://www.ingenuity.com)). Significance of the enrichment is calculated Fisher's exact test right-tailed, with a cutoff of p-value=0.05. Statistical analysis were further performed using R statistical environment (version 3.1.3) <sup>10</sup>.

**Single-locus DNA methylation analysis.** Microarray data was verified by single locus analysis of 8 loci previously identified as PPAR targets using a SYBR-green based real-time PCR analysis of the MeDIP DNA for all samples in the study (n=15). We decided to focus our single locus analysis in this group of genes, since our DNA methylation arrays showed an enrichment on mechanisms of gene regulation by PPARs in both canonical pathways and gene network analyses, and given the widely-recognized role of PPARG in inflammation and macrophage biology<sup>11,12</sup>. The 8 PPAR response elements were selected from the literature on the base of being reported PPARG targets<sup>13-21</sup>. The location of the PPARE were identified either by experimental data reported from the literature and/or a computational approach (Dragon PPAR Response Element (PPRE) Spotter v.2.0 <http://www.cbrc.kaust.edu.sa/ppre/index.php>). The immunoprecipitated DNA methylation fraction (IP fraction) was diluted 1:20 in 1X low TE buffer containing

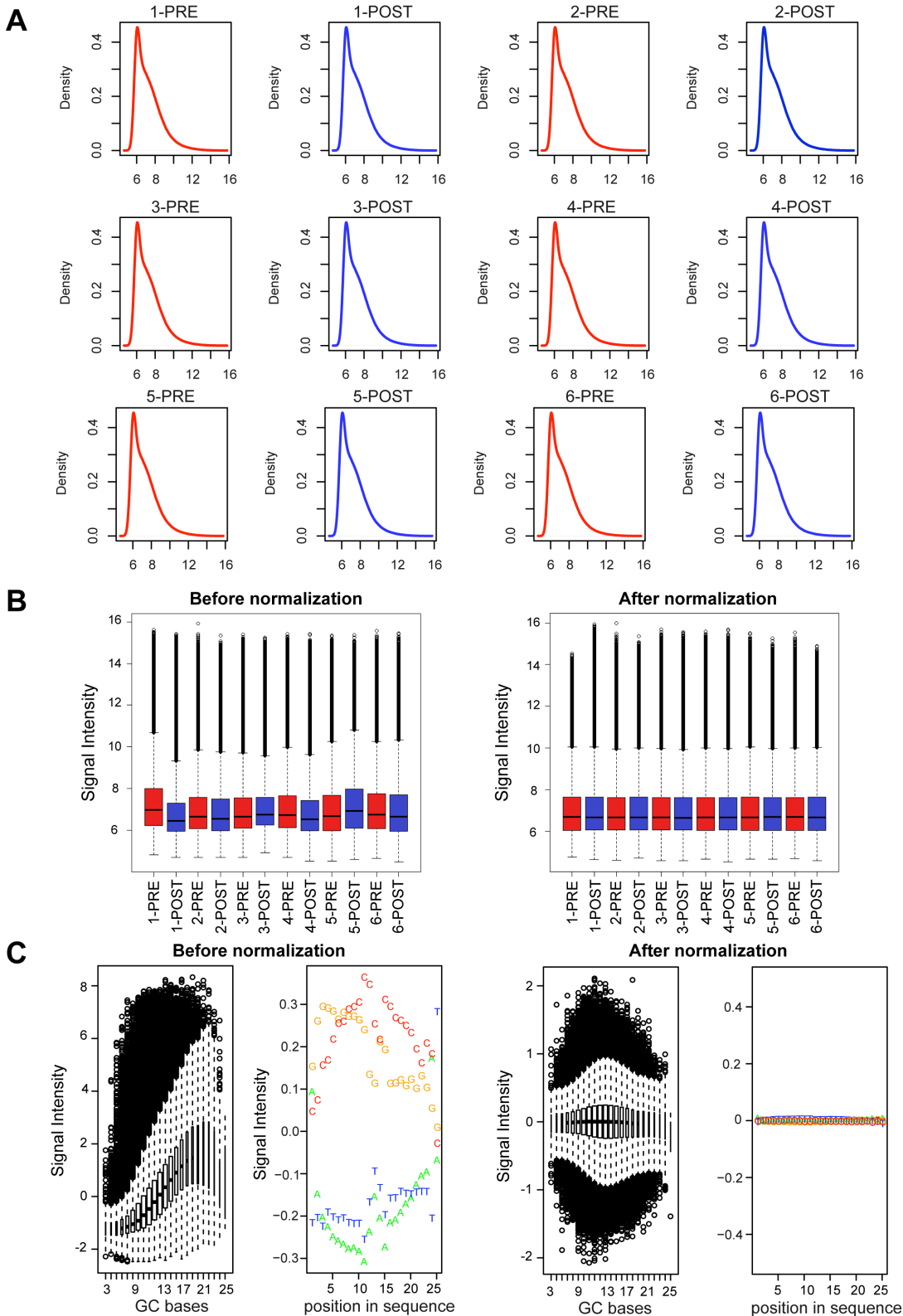
250 ng/ $\mu$ L salmon sperm DNA and 5  $\mu$ L of this dilution were subjected to real-time PCR. The reaction consisted of 1 $\times$  ABI master mix containing Taq polymerase, dNTPs, SYBR green dye and ROX as passive dye (Life Technologies, Carlsbad, CA, USA) and 200 nM of specific primers (Supplementary Material Table S5). The PCR program started with a Taq polymerase activation step (10 min at 95°C) followed by 40 cycles at 95°C for 15 s, 60°C for 1 min and 95°C for 15 s. Data analyses were performed using the 7500 System SDS software version 1.4 (Applied Biosystems). An aliquot (10 %) of the input material in the MeDIP analysis (IN fraction) was used as reference and the % of Input fraction recovery was calculated as: % recovery =  $100 * (2^{((Ct_{IN} - 3.32) - Ct_{IP})})$ . Fold changes between the POST and PRE groups was calculated as the ratio of % recovery between the two groups.

## References:

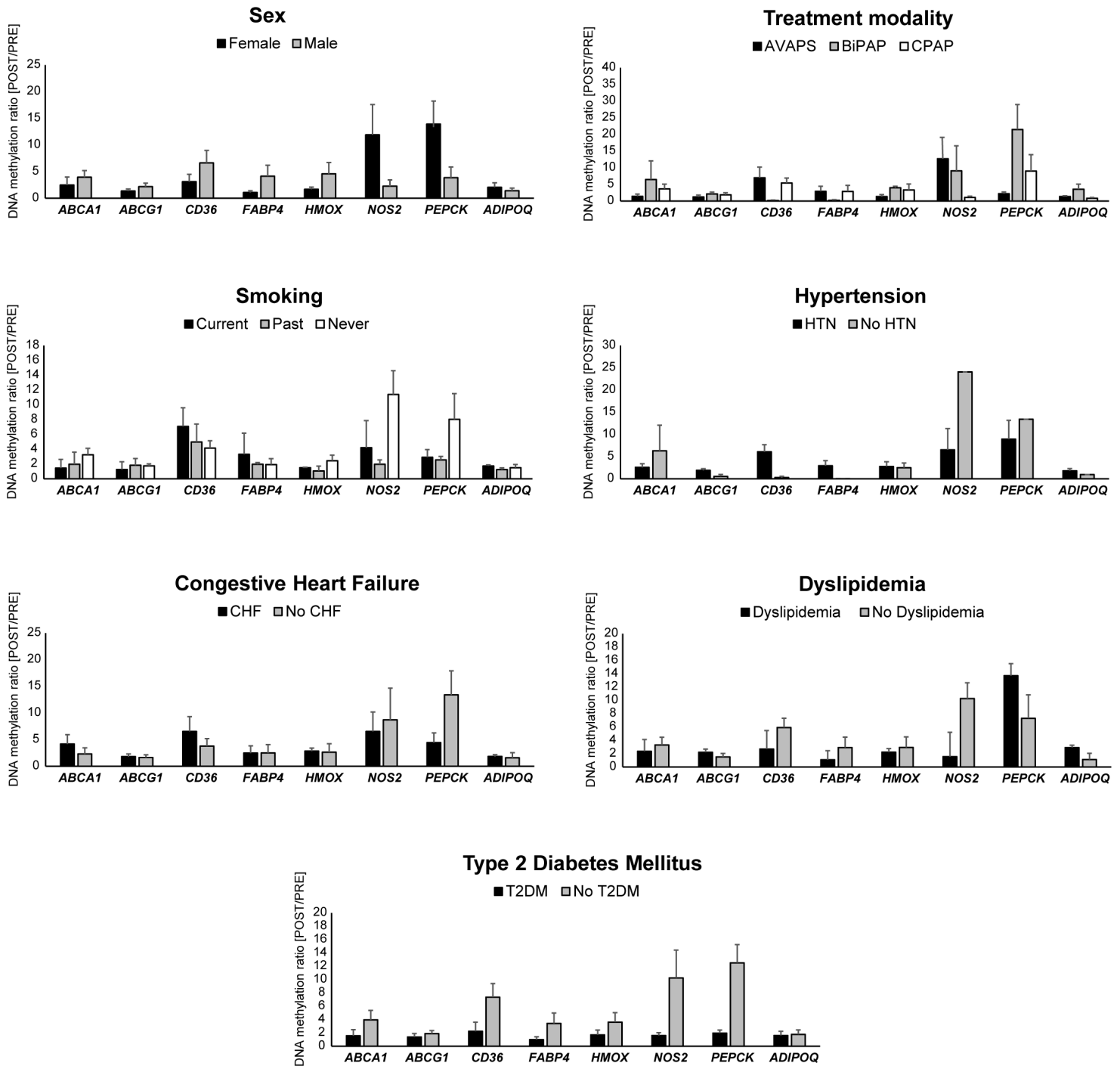
- 1 Iber C, American Academy of Sleep Medicine. The AASM manual for the scoring of sleep and associated events : rules, terminology, and technical specifications. Westchester, IL: American Academy of Sleep Medicine, 2007;
- 2 Kushida CA, Chediak A, Berry RB, et al. Clinical guidelines for the manual titration of positive airway pressure in patients with obstructive sleep apnea. J Clin Sleep Med 2008; 4:157-171
- 3 Berry RB, Chediak A, Brown LK, et al. Best clinical practices for the sleep center adjustment of noninvasive positive pressure ventilation (NPPV) in stable chronic alveolar hypoventilation syndromes. J Clin Sleep Med 2010; 6:491-509
- 4 Kheirandish-Gozal L, Wang Y, Duggan RC, et al. Nitric oxide production by monocytes in children with OSA and endothelial dysfunction. Clin Sci (Lond) 2014; 127:323-330
- 5 Mohn F, Weber M, Schubeler D, et al. Methylated DNA immunoprecipitation (MeDIP). Methods Mol Biol 2009; 507:55-64
- 6 Cortese R, Kwan A, Lalonde E, et al. Epigenetic markers of prostate cancer in plasma circulating DNA. Hum Mol Genet 2012; 21:3619-3631
- 7 Cortese R, Khalyfa A, Bao R, et al. Epigenomic profiling in visceral white adipose tissue of offspring of mice exposed to late gestational sleep fragmentation. Int J Obes (Lond) 2015
- 8 Irizarry RA, Hobbs B, Collin F, et al. Exploration, normalization, and summaries of high density oligonucleotide array probe level data. Biostatistics 2003; 4:249-264
- 9 Johnson WE, Li W, Meyer CA, et al. Model-based analysis of tiling-arrays for ChIP-chip. Proc Natl Acad Sci U S A 2006; 103:12457-12462
- 10 Team RC. R: A Language and Environment for Statistical Computing. Vienna, Austria, 2015

- 11 Lee CH, Evans RM. Peroxisome proliferator-activated receptor-gamma in macrophage lipid homeostasis. *Trends Endocrinol Metab* 2002; 13:331-335
- 12 Kratz M, Coats BR, Hisert KB, et al. Metabolic dysfunction drives a mechanistically distinct proinflammatory phenotype in adipose tissue macrophages. *Cell Metab* 2014; 20:614-625
- 13 Daffu G, Shen X, Senatus L, et al. RAGE Suppresses ABCG1-Mediated Macrophage Cholesterol Efflux in Diabetes. *Diabetes* 2015; 64:4046-4060
- 14 Nicholson AC, Hajjar DP. CD36, oxidized LDL and PPAR gamma: pathological interactions in macrophages and atherosclerosis. *Vascul Pharmacol* 2004; 41:139-146
- 15 Parsons MS, Barrett L, Little C, et al. Harnessing CD36 to rein in inflammation. *Endocr Metab Immune Disord Drug Targets* 2008; 8:184-191
- 16 Katano-Toki A, Satoh T, Tomaru T, et al. THRAP3 interacts with HELZ2 and plays a novel role in adipocyte differentiation. *Mol Endocrinol* 2013; 27:769-780
- 17 Guan HP, Ishizuka T, Chui PC, et al. Corepressors selectively control the transcriptional activity of PPARgamma in adipocytes. *Genes Dev* 2005; 19:453-461
- 18 Lin H, Yu CH, Jen CY, et al. Adiponectin-mediated heme oxygenase-1 induction protects against iron-induced liver injury via a PPARalpha dependent mechanism. *Am J Pathol* 2010; 177:1697-1709
- 19 Minge CE, Ryan NK, Van Der Hoek KH, et al. Troglitazone regulates peroxisome proliferator-activated receptors and inducible nitric oxide synthase in murine ovarian macrophages. *Biol Reprod* 2006; 74:153-160
- 20 Sears DD, Hsiao A, Ofrecio JM, et al. Selective modulation of promoter recruitment and transcriptional activity of PPARgamma. *Biochem Biophys Res Commun* 2007; 364:515-521
- 21 Lefebvre B, Benomar Y, Guedin A, et al. Proteasomal degradation of retinoid X receptor alpha reprograms transcriptional activity of PPARgamma in obese mice and humans. *J Clin Invest* 2010; 120:1454-1468

**e-Figure 1.**



**e-Figure 2.**





**e-Table 1:** Primer sequences for MeDIP-qPCR assays for PPAR-targeted genes.

Gene Symbol	Gene Name	Primer 1 sequence	Primer 2 sequence	Size [bp]
ABCA1	ATP-binding cassette, sub-family A (ABC1), member 1	AAAAGGAAGGAATCACCGA	AAGGACACAATGTAGCAGTT	119
ABCG1	ATP-binding cassette, sub-family G (WHITE), member 1	TCTCCTTTCTCTCCTTCGAT	AAGGAGGCACAGCTTTTAT	101
ADIPOQ	adiponectin	taggaagtttctccgtcaga	cccttatttgctcctaca	103
CD36	CD36 molecule (thrombospondin receptor)	tcagcaagtcagttcctttt	ttctggtgaagaccattac	114
FABP4	fatty acid binding protein 4, adipocyte	TGACGAAAATCCTCTCTCAC	TGCAGCAGAAGGAATAACAT	115
HMOX	heme oxygenase 1	AGGTCAGTTGTAGGGATGAA	CTCCTCACACCCTCTTTAAA	103
NOS2	nitric oxide synthase 2, inducible	catccctccatcactacaga	cagttcaggtaaacagcactc	119
PEPCK	phosphoenolpyruvate carboxykinase 1 (soluble)	TCTTAGGTAGAGAGGCTTCC	CTTGCTGGAGTTTGGAGAA	105

**e-Table 2:** Demographic and clinical data for the patients in the study.

<b>Demographics</b>				
Sample ID	Microarray	Age	Sex	Ethnicity
1	YES	60	Female	African American
2	YES	65	Female	African American
3	YES	45	Male	African American
4	YES	54	Female	African American
5	YES	41	Female	African American
6	YES	49	Female	African American
7	NO	51	Male	African American
8	NO	59	Female	African American
9	NO	36	Male	African American
10	NO	73	Female	African American
11	NO	48	Male	African American
12	NO	56	Male	African American
13	NO	33	Male	Hispanic
14	NO	47	Female	African American
15	NO	47	Female	African American

<b>Treatment details</b>				
<b>ID</b>	<b>Modality</b>	<b>PAP adherence (mean all days used)</b>	<b>PAP adherence (% days used)</b>	<b>PAP adherence (% days used above 4 hours)</b>
1	CPAP	6.4	100	97.1
2	BiPAP	6.6	100	86.8
3	CPAP	6.02	94	84
4	AVAPS	3.82	90.7	46.5
5	BiPAP	6.37	100	88.6
6	CPAP	6.18	100	83.3
7	BiPAP	3.1	93.2	27.3
8	AVAPS	5.27	84	72
9	AVAPS	2.7	64.3	32.1
10	CPAP	6.82	96.2	67.3
11	AVAPS	3.95	88	48
12	AVAPS	6.02	97.7	86
13	CPAP	6.77	90.7	86
14	AVAPS	6.9	93	90.7
15	CPAP	4.9	42	20

<b>Pre-Post treatment physiological values</b>									
<b>ID</b>	<b>AHI (events/hour total sleep time)</b>			<b>4% ODI (/hrTST)</b>			<b>T90 (minutes)</b>		
	<b>pre</b>	<b>post</b>	<b>diff</b>	<b>pre</b>	<b>post</b>	<b>diff</b>	<b>pre</b>	<b>post</b>	<b>diff</b>
1	118.1	2.9	115.2	117.5	4.6	112.9	257.6	7.2	250.4
2	65.3	5.9	59.4	65.5	9.3	56.2	65.5	7.2	58.3
3	81.9	1.5	80.4	74.1	1.2	72.9	217.3	1.3	216
4	118.3	1.4	116.9	117.5	1.9	115.6	327.6	1.6	326
5	52.5	1.5	51	114.5	0	114.5	204.5	0	204.5
6	110.2	9.6	100.6	160.2	9.6	150.6	257.1	25.7	231.4
7	91.3	3.9	87.4	97.6	8.9	88.7	290.7	15.9	274.8
8	103.8	31.3	72.5	127.9	32.5	95.4	200.8	70.7	130.1
9	103.6	35.7	67.9	111	47	64	252.9	115.8	137.1
10	65.2	24.3	40.9	76.6	25.8	50.8	224.8	88.1	136.7
11	54	26.2	27.8	58	24.8	33.2	81	80.4	0.6
12	95.1	11.3	83.8	80.4	11	69.4	274.4	49.6	224.8
13	89.7	10.6	79.1	98.1	2.5	95.6	292.4	1.5	290.9
14	117.6	3.5	114.1	127.2	5	122.2	356	14.5	341.5
15	8.4	0.6	7.8	9.8	1.5	8.3	6.6	2.1	4.5

<b>Pre-Post treatment physiological values (continued)</b>									
<b>ID</b>	<b>SpO<sub>2</sub> nadir (%)</b>			<b>PaCO<sub>2</sub> * (mmHg)</b>			<b>BMI (kg/m<sup>2</sup>)</b>		
	<b>pre</b>	<b>post</b>	<b>diff</b>	<b>pre</b>	<b>post</b>	<b>diff</b>	<b>pre</b>	<b>post</b>	<b>diff</b>
1	64.4	82.9	-18.5	49.3	46.9	2.4	48.1	46.2	1.9
2	58.9	83.9	-25	51.1	44.3	6.8	37.3	37.4	-0.1
3	56.8	88.6	-31.8	44.5	35.2	9.3	42	44.5	-2.5
4	61.2	88.1	-26.9	46.7	35.6	11.1	44.1	43.1	1
5	55.3	93.6	-38.3	48	42.9	5.1	77.1	66.7	10.4
6	50.1	63.6	-13.5	50.5	41.3	9.2	55.6	55.9	-0.3
7	55	83.5	-28.5	71.6	63.8	7.8	52	48.2	3.8
8	54.8	70	-15.2	45.8	40.2	5.6	38.3	38.7	-0.4
9	55.9	59	-3.1	51.1	42.8	8.3	53.2	52.9	0.3
10	53.7	63.8	-10.1	53.6	43.4	10.2	57.2	55.8	1.4
11	50.6	65.9	-15.3	44.7	41.1	3.6	48.9	48.26	0.6
12	51.8	78.5	-26.7	52	35.2	16.8	40	40	0
13	50.1	88.9	-38.8	62.4	44.7	17.7	40.1	41.1	-1
14	51.5	82.6	-31.1	44	44.1	-0.1	61.2	61.5	-0.3
15	83.4	89.3	-5.9	48.4	40.8	7.6	45.6	45.1	0.5

\*: PaCO<sub>2</sub>= Partial pressure of CO<sub>2</sub> in the arterial blood obtained at 6 weeks after initiating PAP therapy.

<b>Comorbidities</b>					
<b>ID</b>	<b>Smoking</b>	<b>Hypertension</b>	<b>Type 2 diabetes mellitus</b>	<b>Congestive heart failure</b>	<b>Dyslipidemia</b>
1	current	no	yes	no	no
2	never	yes	no	no	yes
3	never	yes	no	no	no
4	past	yes	no	no	no
5	never	no	no	yes	no
6	never	yes	no	no	no
7	never	yes	yes	yes	yes
8	past	yes	yes	no	no
9	current	yes	no	yes	no
10	past	yes	yes	yes	yes
11	never	yes	no	yes	no
12	never	yes	yes	no	yes
13	never	yes	no	no	no
14	current	yes	no	yes	no
15	never	yes	no	no	no

**e-Table 3:** Differentially DNA methylated regions between PRE and POST groups.

Coordinates	Length	# probes	p-value	MAT-score	Transcript type	Gene symbol	Distance to TSS
chr10:1372012-1373260	1249	33	8.08E-06	7.22	RefSeq	ADARB2	396411
chr13:113510138-113512001	1864	48	8.08E-06	6.36	RefSeq	LINC00452	3867
chr18:75725595-75727061	1467	40	8.08E-06	6.34	RefSeq	KCNG2	939
chr17:77701017-77702693	1677	46	8.08E-06	6.29	RefSeq	CCDC57	61286
chr11:111248820-111249661	842	24	8.08E-06	6.1	RefSeq	ALG9	-1304
chr17:77910324-77911148	825	18	8.08E-06	6.04	RefSeq	TEX19	0
chr7:100388396-100389290	895	26	8.08E-06	6.02	RefSeq	MUC3A	3408
chr15:81010226-81010914	689	21	8.08E-06	5.75	RefSeq	CPEB1	26715
chr22:48948622-48949878	1257	34	8.08E-06	5.52	RefSeq	PANX2	-1409
chr1:112969380-112970190	811	23	8.08E-06	5.43	RefSeq	CAPZA1	5782
chr18:70381919-70382707	789	22	8.08E-06	5.39	RefSeq	CNDP1	29247
chr9:72218932-72219646	715	20	8.08E-06	5.35	RefSeq	KLF9	0
chr1:55277778-55278666	889	22	8.08E-06	5.31	RefSeq	PCSK9	41
chr19:7008172-7009009	838	25	8.08E-06	5.3	RefSeq	MBD3L3	637
chr12:13038273-13039025	753	19	8.08E-06	5.29	RefSeq	HEBP1	5486
chr11:2881744-2882577	834	19	8.08E-06	5.23	RefSeq	SLC22A18	1656
chr8:67673216-67673873	658	19	8.08E-06	5.22	RefSeq	MYBL1	14166
chr17:35097485-35098366	882	25	8.08E-06	5.21	RefSeq	ERBB2	0
chr6:546547-547487	941	20	8.08E-06	5.2	RefSeq	EXOC2	90655
chr3:171195493-171196125	633	17	8.08E-06	5.19	RefSeq	SEC62	28219
chr16:69255066-69255914	849	23	8.08E-06	5.19	RefSeq	MTSS1L	21542
chr12:113329046-113329897	852	24	8.08E-06	5.11	RefSeq	TBX5	734
chr2:72997421-72998042	622	17	8.08E-06	5.11	RefSeq	EMX1	-70
chr5:176230640-176232948	2309	60	8.08E-06	5.1	RefSeq	UNC5A	60474
chr21:37300697-37301276	580	16	8.08E-06	5.09	RefSeq	RIPPLY3	0
chr15:98914126-98916379	2254	59	8.08E-06	5.07	ncRNA	PRKXP1	633
chr16:65531324-65532117	794	22	8.08E-06	5.07	RefSeq	CES2	5476
chr7:151566456-151567147	692	20	8.08E-06	5.06	RefSeq	KMT2C	196877
chr7:157845745-157846960	1216	35	8.08E-06	5.05	RefSeq	PTPRN2	226284
chr19:6168037-6168807	771	23	8.08E-06	5.04	RefSeq	MLLT1	62153
chr8:347618-348380	763	22	8.08E-06	5.04	RefSeq	FBXO25	810
chr9:139186433-139187221	789	20	8.08E-06	5.04	RefSeq	TMEM210	-113
chr11:133293153-133293964	812	22	8.08E-06	5.04	RefSeq	IGSF9B	37896
chr1:199446299-199447161	863	23	8.08E-06	5.02	RefSeq	IGFN1	19723
chr5:52127026-52127685	660	19	8.08E-06	5.01	RefSeq	PELO	7495
chr7:27172252-27172907	656	19	8.08E-06	5.01	RefSeq	HOXA9	-577

chr17:23901780-23902431	652	16	8.08E-06	5.01	RefSeq	UNC119	1343
chr16:55038657-55039439	783	22	8.08E-06	5.01	RefSeq	NUDT21	3324
chr2:46600411-46601179	769	22	1.62E-05	4.95	RefSeq	ATP6V1E2	0
chr11:62119050-62119700	651	18	1.62E-05	4.91	RefSeq	MTA2	6189
chr3:46717877-46718651	775	22	1.62E-05	4.79	RefSeq	TMIE	50
chr19:58387162-58387770	609	18	2.42E-05	4.74	RefSeq	ZNF665	662
chr10:44817627-44818496	870	25	2.42E-05	4.73	RefSeq	C10orf25	-1150
chr4:104161782-104162598	817	23	3.23E-05	4.72	RefSeq	SLC9B1	-1436
chr11:29989288-29990156	869	24	3.23E-05	4.72	RefSeq	KCNA4	4998
chr17:52345523-52346023	501	14	3.23E-05	4.71	RefSeq	TRIM25	386
chr5:55564379-55564956	578	16	4.04E-05	4.69	RefSeq	ANKRD55	0
chr11:60661878-60662370	493	14	4.04E-05	4.68	RefSeq	VPS37C	23123
chr5:147422468-147423134	667	18	4.04E-05	4.68	RefSeq	SPINK5	-594
chr14:100362766-100363624	859	24	4.85E-05	4.67	ncRNA	MEG3	568
chr15:32180417-32181036	620	18	4.85E-05	4.67	RefSeq	EMC7	310
chr1:34054131-34054683	553	11	5.65E-05	4.65	RefSeq	CSMD2	348780
chr1:156230180-156230748	569	16	5.65E-05	4.65	RefSeq	KIRREL	493
chr6:50895875-50896502	628	16	5.65E-05	4.65	RefSeq	TFAP2B	1477
chr15:83325685-83326229	545	14	5.65E-05	4.64	RefSeq	PDE8A	937
chr11:124485958-124486529	572	16	5.65E-05	4.63	RefSeq	TMEM218	286
chr5:14195580-14196164	585	16	5.65E-05	4.62	RefSeq	TRIO	-665
chr14:24115524-24116329	806	23	6.46E-05	4.62	RefSeq	CTSG	-217
chr7:86617609-86618187	579	16	6.46E-05	4.61	RefSeq	DMTF1	-1426
chr5:158226796-158227589	794	22	6.46E-05	4.59	RefSeq	EBF1	231778
chr20:60987414-60987962	549	15	6.46E-05	4.59	RefSeq	DIDO1	40387
chr2:74129059-74129624	566	16	6.46E-05	4.59	RefSeq	TET3	62020
chr7:44977192-44977876	685	16	6.46E-05	4.59	RefSeq	MYO1G	7354
chr17:18069275-18069786	512	11	6.46E-05	4.58	RefSeq	LLGL1	0
chrX:70280593-70281363	771	22	7.27E-05	4.57	RefSeq	NLGN3	-43
chr4:109312508-109313093	586	17	8.08E-05	4.56	ncRNA	LEF1-AS1	0
chr8:95974250-95974863	614	18	8.89E-05	4.56	RefSeq	CCNE2	1796
chr19:10807192-10807762	571	16	9.69E-05	4.56	RefSeq	TMED1	222
chr17:37792928-37793757	830	23	9.69E-05	4.55	RefSeq	STAT3	283
chr12:97566871-97567514	644	18	9.69E-05	4.55	RefSeq	APAF1	3662
chr6:71722993-71723557	565	16	9.69E-05	4.55	RefSeq	B3GAT2	0
chr17:21011297-21011790	494	14	9.69E-05	4.54	RefSeq	DHRS7B	40464
chr19:42644345-42645053	709	20	9.69E-05	4.53	RefSeq	ZNF569	5127
chr20:62266436-62267027	592	17	1.05E-04	4.52	RefSeq	MYT1	165
chr13:45523147-45523702	556	16	1.05E-04	4.51	RefSeq	ZC3H13	1196

chr14:64071253-64071808	556	15	1.05E-04	4.51	ncRNA	LOC102723809	5032
chr6:32481602-32482408	807	22	1.05E-04	4.51	RefSeq	BTNL2	471
chr4:6524318-6524940	623	16	1.13E-04	4.5	RefSeq	PPP2R2C	91289
chr19:40259567-40260196	630	16	1.13E-04	4.5	ncRNA	HPN-AS1	28820
chr8:2873501-2874292	792	22	1.13E-04	4.5	RefSeq	CSMD1	1965445
chr4:167016214-167016764	551	15	1.13E-04	4.49	RefSeq	TLL1	2354
chr8:125532040-125532675	636	18	1.13E-04	4.49	RefSeq	TRMT12	0
chr9:138395027-138395412	386	11	1.13E-04	4.49	RefSeq	SNAPC4	17299
chr6:35803227-35803838	612	18	1.13E-04	4.49	RefSeq	FKBP5	501
chrX:48724856-48725345	490	15	1.13E-04	4.49	RefSeq	GRIPAP1	18275
chr7:149702018-149702558	541	16	1.13E-04	4.48	RefSeq	REPIN1	5206
chr11:46319631-46320317	687	14	1.13E-04	4.47	RefSeq	DGKZ	8600
chr12:16391275-16391910	636	18	1.29E-04	4.47	RefSeq	MGST1	0
chr22:28025994-28026453	460	12	1.29E-04	4.46	RefSeq	EWSR1	31996
chr20:13921702-13922422	721	20	1.29E-04	4.46	ncRNA	SEL1L2	1558
chr7:65343708-65344349	642	13	1.29E-04	4.45	RefSeq	TPST1	36014
chr14:102869868-102870386	519	14	1.29E-04	4.45	RefSeq	EIF5	0
chr1:159367892-159368526	635	18	1.29E-04	4.44	RefSeq	DEDD	577
chr14:54585618-54586063	446	13	1.29E-04	4.44	RefSeq	SOCS4	22024
chr7:79978606-79979120	515	14	1.29E-04	4.43	RefSeq	GNAT3	59
chr17:7687453-7687964	512	15	1.29E-04	4.43	RefSeq	KDM6B	3493
chr18:43827258-43827759	502	13	1.29E-04	4.43	RefSeq	ZBTB7C	89920
chr19:35125703-35126276	574	13	1.29E-04	4.43	RefSeq	URI1	19312
chr11:61315987-61316672	686	19	1.29E-04	4.43	RefSeq	FEN1	-13
chr3:127904943-127905653	711	20	1.29E-04	4.43	RefSeq	CHCHD6	-100
chr19:4464636-4465166	531	15	1.29E-04	4.42	RefSeq	PLIN4	3551
chr8:144493314-144494023	710	22	1.29E-04	4.42	RefSeq	TOP1MT	19500
chr3:130203764-130204448	685	20	1.29E-04	4.42	RefSeq	EFCC1	602
chr8:42867849-42868347	499	12	1.29E-04	4.42	RefSeq	RNF170	2677
chr1:120415201-120415876	676	19	1.29E-04	4.42	RefSeq	NOTCH2	-1360
chr2:238397465-238397996	532	14	1.29E-04	4.42	RefSeq	RBM44	25338
chr16:54157818-54158523	706	20	1.29E-04	4.41	RefSeq	LPCAT2	57404
chr1:76032373-76033017	645	19	1.29E-04	4.41	RefSeq	RABGGTB	7906
chr8:131019094-131019923	830	23	1.37E-04	4.41	RefSeq	FAM49B	1378
chr16:46049083-46049586	504	14	1.37E-04	4.4	RefSeq	ITFG1	2931
chr4:187350186-187350767	582	16	1.37E-04	4.4	RefSeq	CYP4V2	518
chr12:116023515-116024039	525	15	1.37E-04	4.4	ncRNA	TESC-AS1	1860
chr3:176924106-176924752	647	19	1.37E-04	4.4	RefSeq	NAALADL2	864301
chr7:92949643-92950198	556	16	1.37E-04	4.39	RefSeq	CALCR	91781



chr11:104386623-104387209	587	17	1.45E-04	4.39	RefSeq	CASP5	11897
chr1:102085108-102085698	591	16	1.45E-04	4.39	RefSeq	OLFM3	0
chr15:67391285-67392077	793	23	1.45E-04	4.39	RefSeq	PAQR5	12937
chr14:88327188-88327795	608	17	1.45E-04	4.39	RefSeq	EML5	1055
chr1:201587156-201587695	540	12	1.45E-04	4.39	RefSeq	FMOD	0
chr4:77152550-77153171	622	18	1.53E-04	4.38	RefSeq	ART3	1193
chr3:113054011-113054770	760	18	1.53E-04	4.38	RefSeq	PHLDB2	119994
chr19:7647341-7647940	600	18	1.53E-04	4.37	RefSeq	MCEMP1	-3
chr16:74870627-74871319	693	20	1.53E-04	4.37	RefSeq	CNTNAP4	1950
chr3:125295211-125295823	613	14	1.70E-04	4.37	RefSeq	KALRN	-425
chr17:618119-618784	666	19	1.78E-04	4.36	RefSeq	GLOD4	13538
chr5:140054847-140055388	542	15	1.78E-04	4.36	RefSeq	HARS2	3652
chr7:104696210-104696750	541	15	1.78E-04	4.36	RefSeq	SRPK2	29713
chr9:131636807-131637307	501	15	1.78E-04	4.36	RefSeq	USP20	-210
chr2:128284444-128284960	517	15	1.78E-04	4.36	RefSeq	WDR33	272
chr12:119117013-119117590	578	16	1.78E-04	4.36	RefSeq	GCN1L1	-116
chr3:44259790-44260366	577	16	1.86E-04	4.36	RefSeq	TOPAZ1	1408
chr17:2915143-2915737	595	17	1.86E-04	4.36	RefSeq	OR1D5	-1491
chr7:102682193-102682685	493	14	1.86E-04	4.36	ncRNA	DPY19L2P2	25311
chr2:217205308-217205845	538	15	1.86E-04	4.36	RefSeq	IGFBP2	-527
chr2:113657310-113657863	554	16	1.86E-04	4.36	RefSeq	PSD4	9279
chr19:55239376-55240170	795	23	2.02E-04	4.35	RefSeq	ZNF473	18352
chr3:121292832-121293488	657	19	2.02E-04	4.35	RefSeq	GSK3B	2467
chr19:53866440-53867202	763	21	2.02E-04	4.34	RefSeq	NTN5	875
chr4:141483934-141484580	647	15	2.02E-04	4.34	RefSeq	SCOC	0
chr7:2439168-2439701	534	15	2.02E-04	4.34	RefSeq	CHST12	29447
chr10:74683255-74683882	628	18	2.02E-04	4.34	RefSeq	MRPS16	-797
chr6:161507039-161507540	502	14	2.02E-04	4.34	RefSeq	AGPAT4	107558
chr11:101827602-101828261	660	19	2.02E-04	4.33	RefSeq	TMEM123	725
chr7:151144743-151145434	692	20	2.02E-04	4.33	RefSeq	PRKAG2	59816
chr2:160930020-160930774	755	22	2.02E-04	4.33	RefSeq	RBMS1	127791
chr8:96351025-96351839	815	19	2.02E-04	4.33	RefSeq	C8orf37	-386
chr6:151681824-151682241	418	11	2.02E-04	4.33	RefSeq	AKAP12	78997
chr17:61731217-61731820	604	17	2.02E-04	4.33	RefSeq	PRKCA	1829
chr12:122998612-122999139	528	15	2.02E-04	4.33	RefSeq	CCDC92	23978
chr9:38413606-38414103	498	14	2.02E-04	4.33	RefSeq	IGFBPL1	342
chr19:53801716-53802219	504	15	2.02E-04	4.33	RefSeq	FAM83E	6288
chr10:135013478-135014130	653	18	2.02E-04	4.33	RefSeq	PRAP1	2644
chr1:173230492-173230997	506	14	2.02E-04	4.32	RefSeq	RABGAP1L	29964

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.



chr10:70330227-70330907	681	14	2.02E-04	4.32	RefSeq	DDX50	-133
chr4:141663390-141663906	517	15	2.02E-04	4.32	RefSeq	ELMOD2	-856
chr5:39255326-39255949	624	17	2.02E-04	4.32	RefSeq	FYB	50568
chr5:112283649-112284171	523	14	2.02E-04	4.31	RefSeq	REEP5	1760
chr17:44007445-44008019	575	16	2.02E-04	4.31	RefSeq	HOXB3	-635
chr3:89237532-89238125	594	17	2.02E-04	4.31	RefSeq	EPHA3	-1239
chr1:110975779-110976589	811	22	2.02E-04	4.31	RefSeq	KCNA2	-159
chr1:152416696-152417225	530	15	2.02E-04	4.31	RefSeq	TPM3	5125
chr1:120063856-120064401	546	11	2.02E-04	4.31	RefSeq	PHGDH	7914
chr2:3362888-3363402	515	11	2.02E-04	4.31	RefSeq	TRAPPC12	435
chr5:86742542-86743246	705	20	2.02E-04	4.31	RefSeq	CCNH	1232
chr14:22424320-22424696	377	11	2.02E-04	4.31	RefSeq	REM2	2048
chr3:8787041-8787708	668	16	2.02E-04	4.31	RefSeq	OXTR	-740
chr4:30330498-30331095	598	14	2.02E-04	4.31	RefSeq	PCDH7	-40
chr12:9776758-9777310	553	16	2.02E-04	4.3	RefSeq	CLECL1	0
chr6:168220260-168220775	516	14	2.02E-04	4.3	RefSeq	FRMD1	-864
chr6:32123613-32124309	697	20	2.02E-04	4.3	RefSeq	TNXB	60821
chr1:158268658-158269224	567	13	2.02E-04	4.3	RefSeq	PIGM	-250
chr11:128279499-128280041	543	12	2.02E-04	4.3	RefSeq	KCNJ5	12976
chr3:45860015-45860672	658	18	2.02E-04	4.3	RefSeq	LZTFL1	71549
chr1:111735264-111735964	701	18	2.02E-04	4.3	ncRNA	PGCP1	-1267
chr14:22946829-22947377	549	16	2.10E-04	4.29	RefSeq	MYH6	0
chr19:14798232-14798886	655	18	2.10E-04	4.29	RefSeq	OR7A5	1391
chr11:626516-627152	637	17	2.10E-04	4.29	RefSeq	DRD4	-153
chr17:23679313-23679947	635	18	2.18E-04	4.29	RefSeq	IFT20	6696
chr7:27210064-27210826	763	22	2.18E-04	4.29	ncRNA	HOTTIP	3499
chrX:152792974-152793687	714	20	2.18E-04	4.29	RefSeq	L1CAM	1008
chr6:142508442-142508957	516	12	2.18E-04	4.28	RefSeq	VTA1	-1035
chr9:35717672-35718410	739	22	2.26E-04	4.28	RefSeq	TLN1	3983
chr3:188053769-188054293	525	15	2.26E-04	4.28	RefSeq	ADIPOQ	10612
chr7:158341993-158342504	512	15	2.26E-04	4.28	RefSeq	WDR60	0
chr22:23268128-23268848	721	20	2.26E-04	4.28	RefSeq	GUCD1	13056
chr12:56114873-56115364	492	14	2.26E-04	4.28	RefSeq	INHBC	138
chr8:58355077-58355831	755	21	2.42E-04	4.27	ncRNA	LINC00588	421
chr6:10636575-10637188	614	18	2.42E-04	4.27	RefSeq	GCNT2	7021
chr21:39738942-39739541	600	17	2.42E-04	4.27	RefSeq	SH3BGR	-126
chr2:87830043-87830562	520	15	2.42E-04	4.27	RefSeq	PLGLB1	1318
chr4:156831056-156831655	600	17	2.42E-04	4.26	RefSeq	GUCY1A3	23744
chr2:20113420-20114124	705	20	2.42E-04	4.26	RefSeq	LAPTM4A	1147

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.





chr16:31178628-31179349	722	18	2.42E-04	4.26	RefSeq	ITGAM	0
chr16:1930831-1931656	826	24	2.50E-04	4.26	RefSeq	MSRB1	1640
chrY:2878885-2879419	535	15	2.50E-04	4.26	RefSeq	ZFY	15367
chr19:43817332-43817936	605	17	2.59E-04	4.26	RefSeq	EIF3K	15778
chr1:199229828-199230427	600	17	2.59E-04	4.26	RefSeq	KIF21B	29025
chr17:15844991-15845790	800	20	2.67E-04	4.26	RefSeq	ZSWIM7	-1259
chr2:71070399-71070892	494	14	2.67E-04	4.26	RefSeq	TEX261	4618
chr11:1542682-1543403	722	20	2.67E-04	4.26	RefSeq	DUSP8	6324
chr11:124866399-124866891	493	14	2.67E-04	4.26	RefSeq	FEZ1	4526
chr1:173112099-173112788	690	20	2.67E-04	4.26	RefSeq	RABGAP1L	820
chr11:45071541-45072027	487	12	2.75E-04	4.25	ncRNA	PRDM11	-113
chr6:158512571-158513060	490	14	2.75E-04	4.25	RefSeq	GTF2H5	3204
chr19:45882595-45883230	636	17	2.75E-04	4.25	RefSeq	NUMBL	5174
chr3:57417535-57418019	485	14	2.91E-04	4.25	RefSeq	DNAH12	87093
chrX:26143987-26144586	600	17	2.91E-04	4.25	RefSeq	MAGEB5	0
chr1:114103241-114103871	631	17	2.91E-04	4.25	RefSeq	PHTF1	0
chrX:134884972-134885636	665	19	2.91E-04	4.25	RefSeq	MMGT1	-1171
chr12:11353513-11354131	619	17	2.91E-04	4.25	RefSeq	PRB4	506
chr19:60361754-60362377	624	18	2.91E-04	4.24	RefSeq	TNNI3	-841
chr17:75367992-75368531	540	15	2.91E-04	4.24	RefSeq	CBX2	1420
chr1:205696237-205696739	503	11	2.91E-04	4.24	RefSeq	CR2	1969
chr1:43661890-43662470	581	15	2.91E-04	4.24	RefSeq	SZT2	33747
chr12:123449552-123450039	488	14	2.91E-04	4.24	RefSeq	NCOR2	167925
chr10:105446270-105446784	515	14	2.91E-04	4.24	RefSeq	SH3PXD2A	158371
chr22:19697957-19698496	540	16	2.91E-04	4.23	RefSeq	P2RX6	-946
chr3:52064416-52064947	532	16	2.91E-04	4.23	RefSeq	DUSP7	555
chr7:139122919-139123416	498	15	2.91E-04	4.23	RefSeq	HIPK2	747
chr5:137547796-137548491	696	20	2.91E-04	4.23	RefSeq	KIF20A	5480
chrX:41433822-41434476	655	18	2.91E-04	4.23	RefSeq	GPR34	652
chr17:41845539-41846030	492	14	2.91E-04	4.23	ncRNA	NSFP1	39617
chr3:197118841-197119420	580	17	2.99E-04	4.23	RefSeq	TNK2	858
chrX:69414066-69414623	558	16	2.99E-04	4.22	RefSeq	ARR3	9156
chr4:123493985-123494678	694	20	2.99E-04	4.22	RefSeq	KIAA1109	182777
chr20:54405890-54406417	528	15	2.99E-04	4.22	RefSeq	CSTF1	5056
chr17:75936157-75936686	530	15	2.99E-04	4.22	RefSeq	RNF213	86902
chr19:55999590-56000145	556	16	3.07E-04	4.22	RefSeq	C19orf48	0
chr1:89791394-89791920	527	15	3.07E-04	4.22	RefSeq	LRRC8B	28409
chr13:40452845-40453337	493	13	3.15E-04	4.21	RefSeq	ELF1	1082
chr12:2867356-2867934	579	17	3.15E-04	4.21	RefSeq	RHNO1	10730

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

chr11:116240936-116241499	564	16	3.15E-04	4.21	RefSeq	SIK3	232843
chr19:40534735-40535226	492	13	3.15E-04	4.21	RefSeq	FFAR1	450
chr1:202448402-202448923	522	15	3.15E-04	4.21	RefSeq	GOLT1A	921
chr2:132890677-132891225	549	15	3.15E-04	4.21	RefSeq	GPR39	60
chr17:43268193-43268915	723	19	3.15E-04	4.21	RefSeq	LRRC46	4201
chr17:53759381-53760270	890	25	3.15E-04	4.2	RefSeq	BZRAP1	882
chr16:55261543-55262144	602	17	3.15E-04	4.2	RefSeq	MT1H	316
chr15:44905395-44906276	882	25	3.15E-04	4.2	ncRNA	MIR548A3	320778
chr8:81246883-81247370	488	13	3.15E-04	4.2	RefSeq	TPD52	-433
chr1:7835644-7836156	513	15	3.15E-04	4.2	RefSeq	UTS2	0
chr15:90737238-90737722	485	13	3.15E-04	4.19	RefSeq	ST8SIA2	-422
chr18:28305386-28305864	479	12	3.15E-04	4.19	RefSeq	GAREM	-940
chr10:61571876-61572395	520	15	3.23E-04	4.19	RefSeq	ANK3	-1095
chr15:63158229-63158747	519	15	3.23E-04	4.19	RefSeq	KBTBD13	2022
chr11:123995136-123995651	516	14	3.23E-04	4.19	RefSeq	PANX3	8473
chr17:4819293-4819801	509	15	3.23E-04	4.19	RefSeq	CAMTA2	11884
chr15:75499634-75500291	658	19	3.31E-04	4.19	RefSeq	HMG20A	-7
chr5:101597847-101598596	750	22	3.31E-04	4.19	RefSeq	SLCO4C1	61557
chr7:134116768-134117371	604	15	3.31E-04	4.19	RefSeq	CALD1	2064
chr10:38148594-38149130	537	16	3.31E-04	4.19	RefSeq	ZNF248	37441
chr3:180450743-180451310	568	16	3.39E-04	4.19	RefSeq	KCNMB3	16223
chr14:60517942-60518558	617	18	3.39E-04	4.19	RefSeq	SLC38A6	357
chr8:125649984-125650867	884	22	3.47E-04	4.19	RefSeq	MTSS1	159063
chrX:57164360-57164951	592	16	3.47E-04	4.19	RefSeq	SPIN2B	0
chr11:111446608-111447381	774	22	3.47E-04	4.18	RefSeq	PIH1D2	2725
chr9:21219621-21220229	609	17	3.47E-04	4.18	RefSeq	IFNA17	-1399
chr3:2118270-2118775	506	12	3.47E-04	4.18	RefSeq	CNTN4	2720
chr3:38507428-38507987	560	14	3.47E-04	4.18	RefSeq	ACVR2B	36634
chr22:45402065-45402606	542	17	3.47E-04	4.18	RefSeq	GRAMD4	743
chr5:172688513-172689023	511	14	3.47E-04	4.18	RefSeq	STC2	90
chr7:130019260-130019747	488	14	3.47E-04	4.18	RefSeq	TSGA13	2200
chr4:83565214-83565716	503	15	3.47E-04	4.18	RefSeq	HNRNPDL	4687
chr9:94471489-94472075	587	16	3.47E-04	4.18	RefSeq	IPPK	294
chr1:211474522-211475020	499	14	3.55E-04	4.18	RefSeq	RPS6KC1	183324
chr21:39480327-39481059	733	20	3.55E-04	4.18	RefSeq	BRWD1	126524
chr20:43029178-43029668	491	14	3.64E-04	4.17	RefSeq	STK4	644
chr10:104460033-104460600	568	17	3.64E-04	4.17	RefSeq	ARL3	3581
chr6:636823-637484	662	18	3.64E-04	4.17	RefSeq	EXOC2	658
chr9:42009000-42009518	519	14	3.64E-04	4.17	ncRNA	KGFLP2	67



chrX:86659146-86659680	535	15	3.72E-04	4.17	RefSeq	KLHL4	0
chr8:141843336-141843826	491	14	3.72E-04	4.17	RefSeq	PTK2	236769
chr9:135315024-135315555	532	13	3.72E-04	4.17	RefSeq	CACFD1	116
chr9:86472391-86472924	534	15	3.72E-04	4.17	RefSeq	NTRK2	-1491
chr11:59187743-59188289	547	15	3.72E-04	4.17	RefSeq	PATL1	4799
chr12:48900488-48901103	616	16	3.72E-04	4.17	RefSeq	LIMA1	62518
chr9:34715192-34715677	486	15	3.72E-04	4.17	RefSeq	FAM205A	3859
chr1:109851420-109851969	550	16	3.72E-04	4.17	RefSeq	AMIGO1	1891
chr19:56540182-56540792	611	17	3.72E-04	4.17	RefSeq	ETFB	9117
chr10:127366016-127366533	518	15	3.72E-04	4.16	ncRNA	LOC283038	4214
chr11:65303829-65304330	502	15	3.72E-04	4.16	RefSeq	AP5B1	309
chr2:111590269-111590880	612	16	3.72E-04	4.16	RefSeq	ACOXL	383648
chr19:53834078-53834852	775	19	3.72E-04	4.16	RefSeq	CA11	6412
chr9:16724105-16724666	562	16	3.72E-04	4.16	RefSeq	BNC2	136121
chr14:23728433-23729115	683	19	3.72E-04	4.16	RefSeq	TM9SF1	5668
chr21:34818634-34819152	519	15	3.72E-04	4.16	RefSeq	RCAN1	88861
chr8:124337008-124337580	573	16	3.72E-04	4.16	RefSeq	ZHX1	18329
chrX:10762861-10763610	750	17	3.72E-04	4.16	RefSeq	MID1	-1130
chr5:36640647-36641180	534	15	3.72E-04	4.16	RefSeq	SLC1A3	-1034
chr9:103542018-103542599	582	17	3.72E-04	4.16	RefSeq	GRIN3A	-1334
chr12:10440551-10441433	883	20	3.72E-04	4.15	RefSeq	KLRC4-KLRK1	12580
chr1:154449301-154449787	487	14	3.72E-04	4.15	RefSeq	PMF1	0
chr3:4730055-4730629	575	16	3.72E-04	4.15	RefSeq	ITPR1	220023
chr9:98840712-98841254	543	14	3.72E-04	4.15	RefSeq	CTSV	493
chr3:50349956-50350472	517	15	3.72E-04	4.15	RefSeq	RASSF1	2900
chr1:19795766-19796287	522	16	3.72E-04	4.15	RefSeq	MINOS1	0
chr1:15919488-15920004	517	15	3.72E-04	4.15	RefSeq	PLEKHM2	36074
chr15:43590155-43590724	570	17	3.72E-04	4.15	RefSeq	SLC30A4	11571
chr4:13207117-13207878	762	21	3.72E-04	4.15	RefSeq	BOD1L1	30549
chr11:124056410-124056920	511	11	3.72E-04	4.15	RefSeq	SPA17	7460
chr19:15612230-15612750	521	14	3.72E-04	4.15	RefSeq	CYP4F3	0
chr5:61735065-61735795	731	20	3.72E-04	4.15	RefSeq	DIMT1	0
chr20:33462295-33462958	664	14	3.72E-04	4.15	RefSeq	UQCC1	402
chr15:75257540-75258039	500	14	3.80E-04	4.15	RefSeq	PEAK1	241463
chrX:68317487-68318204	718	21	3.80E-04	4.15	ncRNA	LINC00269	1362
chr12:49705088-49705584	497	10	3.80E-04	4.15	RefSeq	SLC11A2	883
chr4:69851139-69851925	787	21	3.80E-04	4.15	RefSeq	UGT2A3	174
chr3:123034870-123035390	521	15	3.80E-04	4.15	RefSeq	IQCB1	1227
chr10:103103897-103104410	514	15	3.80E-04	4.14	RefSeq	BTRC	117

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

chr2:27968622-27968986	365	11	3.80E-04	4.14	RefSeq	BRE	1636
chr10:105026228-105026782	555	16	3.88E-04	4.14	RefSeq	INA	-128
chr11:95164442-95165033	592	17	3.88E-04	4.14	RefSeq	CEP57	1169
chr8:144171620-144172275	656	19	3.88E-04	4.14	RefSeq	LY6E	343
chr14:44676764-44677252	489	14	3.88E-04	4.14	RefSeq	FANCM	1878
chr11:3211540-3212316	777	22	3.88E-04	4.14	RefSeq	MRGPPE	-1347
chr10:111971081-111971685	605	17	3.88E-04	4.14	RefSeq	MXI1	11102
chr6:88062062-88062711	650	19	3.88E-04	4.14	RefSeq	GJB7	33005
chr6:43256337-43256839	503	14	3.96E-04	4.14	RefSeq	SRF	8231
chr6:44234228-44235124	897	24	3.96E-04	4.14	RefSeq	CAPN11	0
chr12:87056010-87056667	658	17	3.96E-04	4.14	RefSeq	CEP290	3458
chr4:1273552-1274066	515	12	3.96E-04	4.14	RefSeq	MAEA	0
chr3:26639863-26640589	727	21	3.96E-04	4.13	RefSeq	LRRC3B	559
chr2:210446347-210446887	541	15	3.96E-04	4.13	RefSeq	UNC80	101385
chr4:184660849-184661467	619	16	3.96E-04	4.13	ncRNA	LOC389247	1196
chr2:114010577-114011099	523	15	3.96E-04	4.13	ncRNA	PGM5P4-AS1	5639
chr2:131130235-131130803	569	14	3.96E-04	4.13	RefSeq	POTEJ	44659
chr11:105385538-105386201	664	18	3.96E-04	4.13	RefSeq	MSANTD4	11964
chr14:89597066-89597858	793	21	3.96E-04	4.13	RefSeq	KCNK13	-4
chr9:113326547-113327270	724	21	3.96E-04	4.13	RefSeq	ZNF483	0
chr4:106692403-106693017	615	18	3.96E-04	4.13	RefSeq	ARHGEF38	-209
chr20:3794899-3795439	541	16	3.96E-04	4.13	RefSeq	MAVS	19453
chr1:42158524-42159016	493	13	3.96E-04	4.12	ncRNA	HIVEP3	-1440
chr6:124000539-124001095	557	16	3.96E-04	4.12	RefSeq	TRDN	-601
chr17:3748740-3749224	485	14	3.96E-04	4.12	RefSeq	P2RX1	17486
chr12:103203761-103204357	597	17	3.96E-04	4.12	RefSeq	TXNRD1	70074
chr8:143819866-143820432	567	17	3.96E-04	4.12	RefSeq	SLURP1	400
chr16:87523691-87524291	601	17	3.96E-04	4.12	RefSeq	CBFA2T3	46715
chr17:37143657-37144264	608	17	3.96E-04	4.12	RefSeq	HAP1	161
chr20:3695485-3695859	375	11	3.96E-04	4.12	RefSeq	C20orf27	594
chr5:148188191-148188822	632	18	3.96E-04	4.12	RefSeq	ADRB2	1842
chr2:197377049-197377583	535	15	3.96E-04	4.12	RefSeq	C2orf66	5663
chr11:4858573-4859105	533	15	3.96E-04	4.12	RefSeq	OR51T1	-520
chr22:16769606-16770250	645	19	3.96E-04	4.12	RefSeq	MICAL3	0
chr6:117694685-117695252	568	16	3.96E-04	4.12	RefSeq	VGLL2	1271
chr7:148591920-148592574	655	19	3.96E-04	4.12	RefSeq	ZNF783	1725
chr4:147778661-147779256	596	16	3.96E-04	4.12	RefSeq	POU4F2	-239
chrX:78508537-78509066	530	15	3.96E-04	4.11	RefSeq	ITM2A	640
chr7:140357454-140357958	505	14	3.96E-04	4.11	RefSeq	MRPS33	2991

chr17:5346903-5347724	822	19	4.04E-04	4.11	RefSeq	NLRP1	80833
chr6:55846016-55846516	501	13	4.04E-04	4.11	RefSeq	BMP5	1819
chr19:59735640-59736261	622	17	4.04E-04	4.11	ncRNA	KIR3DX1	0
chr20:14264174-14264708	535	15	4.04E-04	4.11	RefSeq	FLRT3	1606
chr3:159311175-159311841	667	19	4.04E-04	4.11	RefSeq	RSRC1	640
chr12:10657295-10657986	692	19	4.04E-04	4.11	RefSeq	MAGOHB	-450
chr17:24014352-24014927	576	16	4.04E-04	4.11	RefSeq	SUPT6H	923
chr6:147564767-147565506	740	19	4.04E-04	4.11	ncRNA	STXBP5-AS1	1938
chr17:24066132-24066661	530	15	4.12E-04	4.1	RefSeq	RAB34	2753
chr2:152398466-152399294	829	24	4.12E-04	4.1	RefSeq	CACNB4	264546
chr10:111673758-111674297	540	16	4.12E-04	4.1	RefSeq	XPNPEP1	-456
chr4:142852944-142853625	682	17	4.12E-04	4.1	RefSeq	IL15	75745
chr1:156491827-156492393	567	16	4.12E-04	4.1	RefSeq	CD1A	1276
chr11:87710342-87710914	573	15	4.12E-04	4.1	RefSeq	CTSC	0
chr12:12763326-12764142	817	23	4.12E-04	4.1	RefSeq	CDKN1B	1855
chr1:36408408-36408919	512	15	4.12E-04	4.1	RefSeq	MAP7D1	14255
chr17:55325558-55326055	498	14	4.12E-04	4.1	RefSeq	TUBD1	-469
chr18:11841783-11842357	575	16	4.12E-04	4.1	RefSeq	GNAL	100312
chr10:126423956-126424485	530	15	4.12E-04	4.1	RefSeq	FAM53B	-1035
chr12:21699823-21700341	519	15	4.12E-04	4.1	RefSeq	LDHB	1655
chr6:49711535-49712056	522	15	4.12E-04	4.09	RefSeq	RHAG	491
chr3:139211388-139212014	627	18	4.12E-04	4.09	RefSeq	CLDN18	11040
chr16:4602389-4602906	518	15	4.12E-04	4.09	RefSeq	UBALD1	2023
chr17:7642225-7642785	561	16	4.12E-04	4.09	RefSeq	DNAH2	78461
chr10:103805159-103806013	855	24	4.12E-04	4.09	RefSeq	C10orf76	0
chr11:65858859-65859463	605	17	4.12E-04	4.09	RefSeq	RIN1	1114
chrX:119380743-119381242	500	15	4.12E-04	4.09	RefSeq	ATP1B4	775
chr8:56872809-56873576	768	21	4.12E-04	4.09	RefSeq	TGS1	24464
chr12:50184662-50185286	625	18	4.12E-04	4.09	RefSeq	SLC4A8	79801
chr10:98019171-98019958	788	22	4.12E-04	4.09	RefSeq	BLNK	1366
chr12:81276917-81277423	507	15	4.20E-04	4.09	RefSeq	CCDC59	-586
chr17:70100019-70100609	591	16	4.20E-04	4.08	RefSeq	CD300LD	-53
chr12:56130046-56130559	514	15	4.20E-04	4.08	RefSeq	INHBC	15311
chr13:52112950-52113515	566	16	4.20E-04	4.08	RefSeq	HNRNPA1L2	23344
chr7:45893848-45894427	580	17	4.20E-04	4.08	RefSeq	IGFBP1	-57
chr5:23558039-23558607	569	16	4.20E-04	4.08	RefSeq	PRDM9	14558
chr19:3565842-3566403	562	13	4.20E-04	4.08	RefSeq	CACTIN	11411
chr17:43375823-43376342	520	12	4.20E-04	4.08	RefSeq	PNPO	1935
chr1:36700430-36700963	534	15	4.20E-04	4.08	RefSeq	MRPS15	1665



chr4:87496005-87496508	504	13	4.20E-04	4.08	RefSeq	MAPK10	96800
chr7:96490236-96490745	510	13	4.20E-04	4.08	RefSeq	DLX5	1335
chr17:72380681-72381093	413	12	4.28E-04	4.08	RefSeq	MGAT5B	4288
chr19:6452143-6452682	540	16	4.28E-04	4.08	RefSeq	TUBB4A	1178
chr19:44083123-44083764	642	18	4.28E-04	4.08	RefSeq	SIRT2	-780
chr10:75198530-75199054	525	15	4.28E-04	4.08	RefSeq	SEC24C	24393
chr1:148021425-148021938	514	15	4.28E-04	4.08	RefSeq	FCGR1A	551
chr7:72647870-72648386	517	15	4.28E-04	4.08	RefSeq	MLXIPL	28421
chr15:39032271-39032798	528	14	4.28E-04	4.07	RefSeq	CHAC1	-130
chr19:59541047-59541564	518	15	4.28E-04	4.07	RefSeq	LILRA4	670
chr5:50707934-50708534	601	17	4.28E-04	4.07	ncRNA	LOC642366	6390
chr1:247118324-247118909	586	16	4.28E-04	4.07	RefSeq	ZNF692	840
chr14:104246263-104246803	541	15	4.28E-04	4.07	RefSeq	INF2	19275
chr15:20834571-20835124	554	15	4.28E-04	4.07	ncRNA	HERC2P2	94577
chr9:2629624-2630143	520	15	4.28E-04	4.07	RefSeq	VLDLR	17831
chr3:134594254-134594816	563	16	4.28E-04	4.07	RefSeq	TMEM108	354432
chr6:30018354-30018869	516	15	4.28E-04	4.07	RefSeq	HLA-A	128
chr15:73448283-73448911	629	18	4.28E-04	4.07	RefSeq	SIN3A	86267
chr8:6551463-6552000	538	15	4.28E-04	4.07	RefSeq	AGPAT5	-1286
chr6:29663282-29663791	510	15	4.44E-04	4.07	RefSeq	OR2H2	0
chr1:6022829-6023332	504	12	4.44E-04	4.07	RefSeq	KCNAB2	5894
chr3:158637404-158637926	523	15	4.44E-04	4.07	RefSeq	VEPH1	65905
chr7:129560210-129560825	616	18	4.44E-04	4.07	RefSeq	KLHDC10	62625
chr19:842506-843348	843	23	4.44E-04	4.07	RefSeq	MED16	871
chr11:89179705-89180353	649	18	4.44E-04	4.07	RefSeq	TRIM49	1039
chr4:96016866-96017425	560	16	4.44E-04	4.07	RefSeq	BMPR1B	118715
chr12:110373404-110373888	485	14	4.44E-04	4.07	RefSeq	SH2B3	16355
chr14:91575455-91576037	583	16	4.44E-04	4.07	RefSeq	TRIP11	120
chr6:43086233-43086964	732	21	4.44E-04	4.06	RefSeq	PPP2R5D	26018
chr17:45812245-45812963	719	16	4.44E-04	4.06	RefSeq	EME1	6665
chr15:49325421-49325934	514	15	4.52E-04	4.06	RefSeq	CYP19A1	92154
chr5:175997570-175998164	595	17	4.52E-04	4.06	RefSeq	EIF4E1B	7281
chr6:166923124-166924031	908	25	4.52E-04	4.06	RefSeq	RPS6KA2	271731
chr6:119713857-119714442	586	16	4.52E-04	4.06	RefSeq	MAN1A1	-1226
chr20:52526449-52526983	535	15	4.52E-04	4.06	RefSeq	DOK5	1031
chr4:85879235-85880045	811	23	4.52E-04	4.06	RefSeq	WDFY3	226524
chr1:165355122-165355654	533	15	4.52E-04	4.06	RefSeq	DUSP27	24411
chr1:205331293-205331897	605	17	4.60E-04	4.06	RefSeq	C4BPB	2086
chr17:55536128-55536739	612	18	4.60E-04	4.06	ncRNA	LOC653653	-1065

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

chr1:47464747-47465249	503	14	4.60E-04	4.06	RefSeq	TAL1	4726
chr11:13324487-13325144	658	19	4.60E-04	4.06	RefSeq	ARNTL	68637
chr1:200061863-200062506	644	17	4.60E-04	4.06	RefSeq	NAV1	86277
chr16:88625889-88626678	790	22	4.69E-04	4.05	RefSeq	GAS8	9380
chr12:39218485-39219005	521	15	4.69E-04	4.05	RefSeq	MUC19	145022
chr1:149304097-149304640	544	16	4.69E-04	4.05	RefSeq	MLLT11	5322
chr2:211054282-211054778	497	14	4.69E-04	4.05	RefSeq	CPS1	3631
chr1:196469698-196470199	502	14	4.69E-04	4.05	RefSeq	NEK7	76967
chr9:97119166-97119710	545	12	4.69E-04	4.05	RefSeq	FANCC	103
chr15:30694519-30695055	537	14	4.69E-04	4.05	RefSeq	ARHGAP11A	0
chr1:10994985-10995674	690	20	4.69E-04	4.05	RefSeq	TARDBP	0
chr1:203279081-203279638	558	16	4.69E-04	4.05	RefSeq	CNTN2	118
chr6:167814773-167815471	699	20	4.77E-04	4.05	ncRNA	LOC401286	7282
chr15:32618758-32619259	502	14	4.77E-04	4.05	ncRNA	GOLGA8B	43805
chr17:34575439-34576095	657	19	4.77E-04	4.05	RefSeq	ARL5C	0
chr17:1567431-1567937	507	15	4.77E-04	4.05	RefSeq	WDR81	864
chr15:20265205-20265716	512	15	4.77E-04	4.05	ncRNA	GOLGA8DP	1377
chr4:47182116-47182762	647	19	4.77E-04	4.05	RefSeq	ATP10D	0
chr3:95127381-95127868	488	14	4.77E-04	4.04	RefSeq	PROS1	47757
chr2:37452859-37453357	499	13	4.77E-04	4.04	RefSeq	QPCT	27602
chr4:39448039-39448614	576	16	4.85E-04	4.04	RefSeq	UBE2K	71980
chr20:19817193-19817768	576	16	4.85E-04	4.04	RefSeq	RIN2	2028
chr1:53159156-53159664	509	13	4.85E-04	4.04	RefSeq	ECHDC2	371
chr8:125250934-125251439	506	14	4.85E-04	4.04	ncRNA	FER1L6-AS2	1506
chr4:54788673-54789247	575	17	4.85E-04	4.04	RefSeq	PDGFRA	-774
chr3:173488546-173489098	553	16	4.85E-04	4.04	RefSeq	FNDC3B	247508
chr5:176800864-176801496	633	18	4.85E-04	4.04	RefSeq	GRK6	14571
chr12:48221186-48221832	647	15	4.85E-04	4.04	RefSeq	KCNH3	1979
chr2:3720674-3721218	545	16	4.85E-04	4.04	RefSeq	ALLC	37013
chr10:133601353-133602069	717	21	4.85E-04	4.04	RefSeq	PPP2R2D	3408
chr8:17564747-17565162	416	12	4.85E-04	4.04	RefSeq	MTUS1	137545
chr3:157756232-157756728	497	14	4.93E-04	4.04	RefSeq	SSR3	-564
chr1:42393011-42393457	447	13	4.93E-04	4.04	RefSeq	GUCA2B	1332
chr19:5792072-5792581	510	15	4.93E-04	4.04	RefSeq	FUT6	-1329
chr1:115124422-115124978	557	15	4.93E-04	4.04	RefSeq	SIKE1	0
chr2:42874740-42875273	534	15	4.93E-04	4.04	RefSeq	HAAO	-1484
chr8:86537708-86538216	509	15	4.93E-04	4.04	RefSeq	CA3	-92
chr7:77165053-77165642	590	17	4.93E-04	4.04	RefSeq	RSBN1L	1374
chr9:93161853-93162571	719	20	4.93E-04	4.03	RefSeq	AUH	1457



chrY:9958598-9959497	900	24	4.93E-04	4.03	RefSeq	TSPY4	43988
chr13:102515003-102515510	508	15	5.09E-04	4.03	RefSeq	SLC10A2	1688
chr6:138580215-138580753	539	14	5.09E-04	4.03	RefSeq	KIAA1244	55469
chr10:22672333-22672958	626	18	5.09E-04	4.03	RefSeq	SPAG6	-1422
chr15:33626709-33627262	554	14	5.09E-04	4.03	RefSeq	DPH6	-1012
chr5:34071598-34072206	609	17	5.09E-04	4.03	RefSeq	C1QTNF3	6923
chr6:27886132-27886664	533	15	5.09E-04	4.03	RefSeq	HIST1H3H	311
chr3:59934750-59935537	788	23	5.09E-04	4.03	RefSeq	FHIT	1276637
chr12:5023488-5024237	750	22	5.09E-04	4.03	RefSeq	KCNA5	142
chr16:4334038-4334616	579	16	5.09E-04	4.03	RefSeq	CORO7-PAM16	72348
chr11:65117483-65118334	852	20	5.09E-04	4.03	RefSeq	KCNK7	1710
chr9:6002721-6003432	712	20	5.09E-04	4.03	RefSeq	RANBP6	2209
chr15:20636683-20637176	494	15	5.09E-04	4.03	RefSeq	NIPA1	1109
chrX:64118109-64118687	579	12	5.09E-04	4.02	RefSeq	ZC4H2	52663
chr2:202273485-202274102	618	18	5.09E-04	4.02	RefSeq	ALS2	80039
chr1:143699541-143700210	670	16	5.17E-04	4.02	RefSeq	PDE4DIP	6181
chr9:137744827-137745334	508	14	5.17E-04	4.02	RefSeq	KCNT1	10975
chr17:36348005-36348515	511	13	5.25E-04	4.02	RefSeq	KRT23	-583
chr3:145174164-145174690	527	15	5.25E-04	4.02	RefSeq	C3orf58	-167
chr4:120432146-120432728	583	13	5.25E-04	4.02	RefSeq	USP53	78916
chr5:147142755-147143369	615	17	5.33E-04	4.02	RefSeq	JAKMIP2	-150
chr12:127465730-127466252	523	15	5.33E-04	4.02	RefSeq	TMEM132C	147829
chrX:106047179-106047693	515	15	5.33E-04	4.02	RefSeq	CLDN2	17129
chr16:216235-216726	492	14	5.33E-04	4.02	RefSeq	LUC7L	2725
chr17:23932778-23933276	499	15	5.33E-04	4.02	RefSeq	SPAG5	16908
chr16:87443894-87444419	526	15	5.33E-04	4.02	RefSeq	GALNS	6457
chr1:66990317-66990800	484	14	5.33E-04	4.02	RefSeq	TCTEX1D1	0
chr11:47154987-47155532	546	15	5.33E-04	4.02	RefSeq	ARFGAP2	0
chr8:11186110-11186651	542	16	5.33E-04	4.02	RefSeq	MTMR9	6700
chr16:85099168-85099830	663	19	5.33E-04	4.02	ncRNA	FENDRR	138
chr9:3884912-3885499	588	17	5.33E-04	4.02	RefSeq	GLIS3	404537
chr5:179152284-179152771	488	14	5.33E-04	4.02	RefSeq	LTC4S	-821
chr22:30052917-30053502	586	17	5.33E-04	4.02	RefSeq	PATZ1	18748
chr12:104249213-104249790	578	15	5.33E-04	4.02	RefSeq	C12orf75	669
chr8:87311339-87311853	515	14	5.33E-04	4.02	RefSeq	SLC7A13	0
chr19:55070824-55071322	499	14	5.33E-04	4.02	RefSeq	AKT1S1	1135
chr8:67253002-67253504	503	12	5.33E-04	4.02	RefSeq	CRH	0
chr11:13438141-13438759	619	18	5.33E-04	4.01	RefSeq	BTBD10	2662
chr14:63744645-63745136	492	14	5.33E-04	4.01	RefSeq	SYNE2	355209

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.



chr5:96051284-96051669	386	11	5.33E-04	4.01	RefSeq	CAST	27667
chr9:14310640-14311142	503	14	5.33E-04	4.01	RefSeq	NFIB	77841
chr1:2981151-2981672	522	15	5.33E-04	4.01	RefSeq	PRDM16	5549
chr13:34955033-34955639	607	18	5.33E-04	4.01	RefSeq	NBEA	6147
chr18:8706170-8706706	537	15	5.33E-04	4.01	RefSeq	MTCL1	-663
chr4:2785482-2786107	626	17	5.33E-04	4.01	RefSeq	SH3BP2	20934
chr1:143708821-143709307	487	14	5.33E-04	4.01	RefSeq	PDE4DIP	-352
chr7:141013875-141014435	561	17	5.33E-04	4.01	RefSeq	KIAA1147	33988
chr2:180160155-180160725	571	16	5.33E-04	4.01	RefSeq	ZNF385B	158290
chr6:29120362-29120949	588	17	5.33E-04	4.01	RefSeq	OR2W1	0
chr8:57282878-57283394	517	15	5.33E-04	4.01	RefSeq	PLAG1	3020
chr18:59965509-59966000	492	14	5.33E-04	4.01	ncRNA	LINC00305	1241
chr16:4488844-4489253	410	12	5.33E-04	4.01	RefSeq	HMOX2	22502
chr1:110829645-110830172	528	15	5.33E-04	4.01	ncRNA	CYMP	4734
chr3:102048858-102049347	490	14	5.33E-04	4.01	RefSeq	ABI3BP	145678
chr6:99904255-99904750	496	13	5.33E-04	4.01	RefSeq	FAXC	-2
chr6:65677902-65678411	510	14	5.33E-04	4.01	RefSeq	EYS	795429
chr15:31326240-31326772	533	15	5.33E-04	4.01	ncRNA	TMC05B	277
chr10:95505728-95506264	537	15	5.41E-04	4.01	RefSeq	LGI1	-1292
chr1:218769421-218770104	684	19	5.41E-04	4	RefSeq	MARK1	1273
chr11:3199346-3199917	572	17	5.41E-04	4	ncRNA	MRGPRG-AS1	3208
chr20:15786892-15787372	481	14	5.41E-04	4	RefSeq	MACROD2	661388
chr1:210673606-210674174	569	14	5.41E-04	4	RefSeq	NENF	754
chr8:19839014-19839547	534	15	5.41E-04	4	RefSeq	LPL	-1315
chr18:55718259-55718935	677	18	5.41E-04	4	RefSeq	PMAIP1	87
chr7:89712014-89712712	699	19	5.41E-04	4	RefSeq	CFAP69	0
chr6:2121367-2121873	507	11	5.41E-04	4	RefSeq	GMDS	-142
chr6:111910063-111910690	628	16	5.41E-04	4	RefSeq	REV3L	922
chr1:19105221-19105709	489	14	5.49E-04	4	RefSeq	IFFO2	49705
chr5:59228223-59228713	491	14	5.49E-04	4	RefSeq	PDE4D	590970
chr12:94777043-94777789	747	22	5.49E-04	4	RefSeq	SNRPF	203
chr10:102726979-102727475	497	14	5.49E-04	4	RefSeq	SEMA4G	4703
chr12:120724462-120724974	513	14	5.49E-04	4	ncRNA	LINC01089	800
chr15:65331340-65331816	477	14	5.49E-04	4	RefSeq	AAGAB	2775
chr1:115012116-115012649	534	15	5.49E-04	4	RefSeq	DENND2C	1607
chr11:71501658-71502156	499	14	5.57E-04	4	RefSeq	ANAPC15	-187
chr5:174355246-174355754	509	15	5.57E-04	4	ncRNA	FLJ16171	0
chr1:16215629-16216260	632	17	5.74E-04	4	RefSeq	HSPB7	1613
chr12:45201641-45202652	1012	29	5.74E-04	4	ncRNA	LOC100288798	137915



chr11:59804665-59805155	491	15	5.74E-04	3.99	RefSeq	MS4A4A	75
chr3:166276538-166277034	497	10	5.74E-04	3.99	RefSeq	SI	1944
chr15:38436921-38437412	492	11	5.82E-04	3.99	RefSeq	DISP2	-314
chr17:40367934-40368520	587	17	5.90E-04	3.99	RefSeq	KIF18B	12086
chr11:64173467-64173959	493	13	5.98E-04	3.99	RefSeq	NRXN2	73278
chr3:48450838-48451349	512	15	5.98E-04	3.99	RefSeq	CCDC51	5185
chr12:51623450-51624142	693	15	6.06E-04	3.99	RefSeq	KRT8	5776
chr15:41697781-41698278	498	13	6.06E-04	3.99	RefSeq	STRC	13
chrX:17304279-17304793	515	15	6.06E-04	3.99	RefSeq	NHS	815
chr3:1110163-1110663	501	14	6.06E-04	3.99	RefSeq	CNTN6	821
chr2:178887579-178888155	577	12	6.06E-04	3.98	RefSeq	OSBPL6	120125
chr12:45044063-45044737	675	18	6.06E-04	3.98	RefSeq	SLC38A2	8176
chr1:26510988-26511319	332	10	6.06E-04	3.98	RefSeq	UBXN11	6025
chr19:56209692-56210192	501	15	6.06E-04	3.98	RefSeq	KLK10	5052
chr16:74894829-74895351	523	14	6.06E-04	3.98	RefSeq	CNTNAP4	26152
chr4:55908716-55909303	588	17	6.14E-04	3.98	RefSeq	SRD5A3	1571
chrX:41340695-41341177	483	14	6.14E-04	3.98	RefSeq	CASK	326055
chr6:35853334-35853672	339	10	6.14E-04	3.98	RefSeq	CLPSL2	985
chr7:141125605-141126118	514	15	6.22E-04	3.98	RefSeq	TAS2R4	847
chr3:187563234-187563771	538	15	6.38E-04	3.98	RefSeq	DGKG	-516
chr4:109764317-109764650	334	10	6.38E-04	3.97	RefSeq	RPL34	3146
chr17:30499348-30499734	387	12	6.38E-04	3.97	RefSeq	UNC45B	399
chr17:72787498-72788081	584	17	6.38E-04	3.97	RefSeq	42256	-1006
chr16:14631250-14631794	545	13	6.38E-04	3.97	RefSeq	PARN	0
chr3:15444359-15444853	495	13	6.38E-04	3.97	RefSeq	METTL6	-300
chr6:31024865-31025597	733	20	6.38E-04	3.97	RefSeq	DPCR1	8109
chr6:108198999-108199525	527	15	6.38E-04	3.97	RefSeq	SCML4	52690
chr22:20171969-20172506	538	16	6.46E-04	3.97	ncRNA	PI4KAP2	29275
chr14:74418347-74418841	495	11	6.46E-04	3.97	RefSeq	DLST	0
chr9:124731890-124732403	514	14	6.46E-04	3.96	RefSeq	ZBTB26	1198
chr4:82342904-82343420	517	15	6.46E-04	3.96	RefSeq	PRKG2	11876
chr19:14390838-14391370	533	15	6.54E-04	3.96	RefSeq	DDX39A	0
chr18:27153186-27153705	520	15	6.54E-04	3.96	RefSeq	DSG1	1136
chr5:37238305-37238648	344	10	6.54E-04	3.96	RefSeq	C5orf42	46640
chr15:76173777-76174288	512	14	6.54E-04	3.96	RefSeq	SH2D7	1795
chr4:123594655-123595129	475	11	6.54E-04	3.96	RefSeq	IL2	1972
chr1:204709637-204710154	518	16	6.54E-04	3.96	RefSeq	IKBKE	-55
chr16:3110340-3110858	519	15	6.54E-04	3.96	RefSeq	ZNF205	7776
chr2:111206459-111206971	513	12	6.54E-04	3.95	RefSeq	ACOXL	0

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.



chr19:42882134-42882633	500	14	6.62E-04	3.95	RefSeq	ZNF607	19297
chr6:149726617-149727135	519	15	6.79E-04	3.95	RefSeq	TAB2	45861
chr16:88082991-88083502	512	13	6.87E-04	3.95	RefSeq	ANKRD11	969
chr17:59126069-59126575	507	14	6.95E-04	3.95	RefSeq	MAP3K3	72536
chr17:46296333-46296951	619	17	6.95E-04	3.95	RefSeq	TOB1	3388
chr20:62264386-62264946	561	16	6.95E-04	3.95	RefSeq	MYT1	-1325
chr14:57833435-57833923	489	14	6.95E-04	3.95	RefSeq	ARID4A	-1052
chr16:65844233-65844601	369	11	7.03E-04	3.95	RefSeq	SLC9A5	3877
chr10:59696444-59696942	499	14	7.11E-04	3.94	RefSeq	IPMK	759
chr7:127737908-127738398	491	14	7.19E-04	3.94	RefSeq	RBM28	32801
chr1:160304829-160305314	486	14	7.19E-04	3.94	RefSeq	NOS1AP	-891
chr3:48646920-48647425	506	14	7.19E-04	3.94	RefSeq	SLC26A6	-636
chr7:66097212-66097710	499	14	7.19E-04	3.94	RefSeq	SBDS	314
chr3:115496626-115497131	506	15	7.19E-04	3.94	RefSeq	TIGIT	1103
chr12:21381527-21382039	513	15	7.19E-04	3.94	RefSeq	SLCO1A2	57600
chr15:72393140-72393655	516	15	7.27E-04	3.94	RefSeq	CCDC33	77457
chr1:114952649-114953174	526	15	7.27E-04	3.94	RefSeq	DENND2C	61082
chr2:53848786-53849273	488	14	7.35E-04	3.94	RefSeq	CHAC2	353
chr19:35553375-35553896	522	15	7.35E-04	3.93	RefSeq	ZNF536	-1272
chr7:94375444-94375956	513	14	7.35E-04	3.93	RefSeq	PPP1R9A	559
chr11:111541865-111542384	520	14	7.35E-04	3.93	RefSeq	TEX12	-921
chr20:33048977-33049494	518	15	7.35E-04	3.93	RefSeq	MYH7B	41678
chr1:150902491-150903021	531	11	7.35E-04	3.93	RefSeq	LCE2D	0
chr17:33706859-33707285	427	13	7.43E-04	3.93	RefSeq	MRPL45	351
chr21:41800567-41801073	507	14	7.51E-04	3.93	RefSeq	TMPRSS2	790
chr17:51157570-51158125	556	14	7.51E-04	3.93	RefSeq	TMEM100	6357
chr5:32822888-32823398	511	14	7.51E-04	3.93	RefSeq	NPR3	75693
chr6:64088492-64089063	572	16	7.51E-04	3.93	RefSeq	LGSN	-650
chr13:102290206-102290698	493	15	7.51E-04	3.93	RefSeq	BIVM	40806
chr10:105100633-105101148	516	14	7.51E-04	3.93	RefSeq	PCGF6	0
chr4:141294037-141294528	492	12	7.51E-04	3.93	RefSeq	MAML3	156
chr2:101978739-101979301	563	16	7.59E-04	3.92	RefSeq	IL1R2	4001
chrX:72138062-72138616	555	16	7.59E-04	3.92	RefSeq	PABPC1L2B	-1461
chr6:71722097-71722594	498	14	7.59E-04	3.92	RefSeq	B3GAT2	916
chr1:155051809-155052299	491	14	7.59E-04	3.92	RefSeq	NTRK1	0
chr5:34955571-34956075	505	15	7.59E-04	3.92	RefSeq	BRIX1	3994
chr3:25681149-25681694	546	15	7.59E-04	3.92	RefSeq	TOP2B	-281
chr3:152405679-152406076	398	11	7.59E-04	3.92	RefSeq	MED12L	118404
chr1:205143429-205143936	508	14	7.59E-04	3.92	RefSeq	FAIM3	18066

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.



chr1:85818864-85819351	488	14	7.59E-04	3.92	RefSeq	CYR61	0
chr10:72214983-72215475	493	14	7.59E-04	3.92	RefSeq	TBATA	0
chr6:167972629-167973131	503	15	7.59E-04	3.92	RefSeq	MLLT4	2109
chr6:159573201-159573692	492	14	7.59E-04	3.92	RefSeq	FNDC1	62784
chr6:90328921-90329449	529	15	7.59E-04	3.92	RefSeq	ANKRD6	129305
chr17:24643832-24644348	517	12	7.59E-04	3.92	RefSeq	NUFIP2	945
chr2:155265351-155265873	523	15	7.59E-04	3.92	RefSeq	KCNJ3	2012
chr1:170682514-170683073	560	16	7.59E-04	3.92	RefSeq	C1orf105	26063
chr2:160977236-160977744	509	14	7.59E-04	3.92	RefSeq	RBMS1	80821
chr14:93850246-93850746	501	14	7.59E-04	3.92	RefSeq	SERPINA6	8696
chr9:40763987-40764486	500	14	7.59E-04	3.92	RefSeq	ZNF658	17627
chr2:148497427-148497943	517	14	7.59E-04	3.91	RefSeq	MBD5	2377
chr10:74985089-74985595	507	15	7.59E-04	3.91	RefSeq	USP54	19845
chr14:70442167-70442674	508	12	7.67E-04	3.91	RefSeq	PCNX	-1201
chr4:113287630-113288161	532	15	7.67E-04	3.91	RefSeq	C4orf32	1628
chr4:48183571-48184066	496	14	7.67E-04	3.91	RefSeq	SLC10A4	3454
chr19:41121027-41121583	557	16	7.67E-04	3.91	RefSeq	LRFN3	1165
chr20:58062925-58063398	474	12	7.67E-04	3.91	RefSeq	C20orf197	-977
chr14:20095080-20095617	538	11	7.67E-04	3.91	RefSeq	RNASE9	3314
chr19:51498004-51498824	821	19	7.76E-04	3.91	RefSeq	HIF3A	4531
chr21:44124697-44125213	517	15	7.76E-04	3.91	RefSeq	AGPAT3	15153
chr11:55318455-55318995	541	15	7.84E-04	3.91	RefSeq	OR5D14	-613
chr17:65679273-65679765	493	14	7.92E-04	3.91	RefSeq	KCNJ2	2002
chr1:15130943-15131294	352	10	8.00E-04	3.91	RefSeq	KAZN	7731
chr1:8308508-8308905	398	12	8.00E-04	3.91	RefSeq	SLC45A1	7776
chr14:49135747-49136142	396	11	8.00E-04	3.91	RefSeq	LRR1	582
chr14:22684708-22685197	490	14	8.00E-04	3.91	RefSeq	SLC7A8	9311
chr4:87734175-87734842	668	19	8.08E-04	3.91	RefSeq	PTPN13	0
chr2:165185615-165186132	518	15	8.16E-04	3.91	RefSeq	GRB14	475
chr3:129777902-129778416	515	11	8.16E-04	3.91	ncRNA	C3orf27	-282
chr2:72996185-72996699	515	14	8.16E-04	3.9	RefSeq	EMX1	-1413
chr7:143581543-143582090	548	15	8.16E-04	3.9	ncRNA	LOC101928605	58196
chr12:62347189-62347698	510	15	8.16E-04	3.9	RefSeq	DPY19L2	924
chr1:1017255-1017759	505	15	8.16E-04	3.9	RefSeq	C1orf159	23841
chr11:61006128-61006636	509	15	8.16E-04	3.9	RefSeq	PPP1R32	967
chrX:6156368-6156933	566	16	8.16E-04	3.9	RefSeq	NLGN4X	0
chr18:69964365-69964904	540	15	8.16E-04	3.9	RefSeq	FBXO15	1177
chr4:115045570-115046083	514	14	8.16E-04	3.9	RefSeq	ARSJ	74245
chr22:34965592-34966081	490	11	8.32E-04	3.9	RefSeq	APOL2	0

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

chr19:47073610-47074115	506	13	8.32E-04	3.9	RefSeq	CD79A	580
chr6:75970437-75970923	487	14	8.32E-04	3.9	RefSeq	COL12A1	1421
chr17:21257637-21258077	441	13	8.32E-04	3.9	RefSeq	KCNJ18	8596
chr17:38185408-38185898	491	14	8.32E-04	3.89	RefSeq	WNK4	-277
chr5:140281679-140282496	818	22	8.32E-04	3.89	RefSeq	PCDHA1	135774
chr1:234371274-234371814	541	15	8.40E-04	3.89	RefSeq	GPR137B	-641
chr2:211124122-211124631	510	15	8.40E-04	3.89	RefSeq	CPS1	73471
chr1:145481293-145481821	529	15	8.40E-04	3.89	RefSeq	BCL9	1398
chr19:7651476-7651964	489	13	8.56E-04	3.89	RefSeq	TRAPPC5	0
chr3:49138017-49138532	516	15	8.56E-04	3.89	RefSeq	LAMB2	7072
chr1:93578538-93579028	491	14	8.56E-04	3.89	ncRNA	LOC100131564	4929
chr16:63601447-63601935	489	14	8.56E-04	3.89	RefSeq	CDH11	111486
chr19:2187563-2188105	543	16	8.56E-04	3.89	RefSeq	PLEKHJ1	-210
chr3:127683701-127684257	557	16	8.56E-04	3.89	RefSeq	UROC1	35050
chr11:193868-194369	502	15	8.56E-04	3.89	RefSeq	BET1L	3054
chr2:178643902-178644391	490	14	8.56E-04	3.89	RefSeq	PDE11A	36922
chr15:42616163-42616670	508	13	8.56E-04	3.89	RefSeq	EIF3J	0
chrX:53580353-53580847	495	14	8.56E-04	3.89	RefSeq	HUWE1	149553
chr4:9392797-9393296	500	14	8.56E-04	3.89	RefSeq	DRD5	441
chr11:67133360-67133925	566	16	8.64E-04	3.89	RefSeq	NDUFV1	2461
chr2:174820613-174821130	518	14	8.64E-04	3.89	RefSeq	OLA1	482
chr6:31789251-31789731	481	13	8.64E-04	3.89	RefSeq	LY6G6D	-1381
chr12:7234299-7234800	502	13	8.64E-04	3.89	RefSeq	PEX5	74
chr11:47473889-47474397	509	14	8.64E-04	3.89	RefSeq	CELF1	27720
chr16:30916660-30917179	520	15	8.64E-04	3.88	RefSeq	STX1B	12152
chr12:94709025-94709534	510	15	8.64E-04	3.88	RefSeq	NTN4	-357
chr9:111559-112108	550	15	8.64E-04	3.88	RefSeq	CBWD1	56968
chr5:149345398-149345917	520	15	8.64E-04	3.88	RefSeq	SLC26A2	24905
chr22:22529542-22530313	772	21	8.64E-04	3.88	RefSeq	SLC2A11	652
chr11:111604028-111604635	608	17	8.64E-04	3.88	RefSeq	PTS	1730
chr22:36533025-36533570	546	14	8.64E-04	3.88	RefSeq	GCAT	-288
chr2:160277672-160278187	516	14	8.64E-04	3.88	RefSeq	42070	458
chr1:54642116-54642615	500	14	8.64E-04	3.88	RefSeq	SSBP3	2042
chr16:29738772-29739280	509	14	8.64E-04	3.88	RefSeq	MVP	0
chr11:9067379-9067858	480	13	8.64E-04	3.88	RefSeq	SCUBE2	1869
chr1:205105202-205105695	494	14	8.64E-04	3.88	RefSeq	IL20	-82
chr1:176330522-176331016	495	14	8.64E-04	3.88	RefSeq	RASAL2	1035
chr2:232497302-232497790	489	14	8.64E-04	3.88	RefSeq	NPPC	1493
chr1:6502137-6502737	601	17	8.64E-04	3.88	RefSeq	PLEKHG5	0



chr15:64370982-64371463	482	14	8.64E-04	3.88	RefSeq	DIS3L	-1224
chr7:91703882-91704225	344	10	8.72E-04	3.88	RefSeq	KRIT1	8940
chr7:93041425-93041968	544	16	8.72E-04	3.88	RefSeq	CALCR	11
chr5:137534620-137535137	518	15	8.81E-04	3.87	RefSeq	BRD8	7121
chr18:46598683-46599116	434	12	8.89E-04	3.87	RefSeq	MRO	6637
chr5:149771301-149771681	381	10	8.89E-04	3.87	RefSeq	CD74	1012
chr5:38630890-38631376	487	14	8.89E-04	3.87	RefSeq	LIFR	0
chrX:106964191-106964666	476	14	8.89E-04	3.87	RefSeq	MID2	8451
chr14:67253535-67254041	507	10	8.89E-04	3.87	RefSeq	RDH12	15179
chr7:142885066-142885588	523	15	8.89E-04	3.87	RefSeq	TAS2R41	0
chr18:3438403-3438903	501	14	8.89E-04	3.87	RefSeq	TGIF1	-508
chr3:150856235-150856746	512	14	8.89E-04	3.87	RefSeq	WWTR1	47005
chr6:97352540-97353100	561	15	8.89E-04	3.87	RefSeq	GPR63	38975
chr7:21549101-21549833	733	20	8.89E-04	3.87	RefSeq	DNAH11	0
chr11:133319933-133320424	492	15	8.97E-04	3.87	RefSeq	IGSF9B	11436
chr11:386148-386650	503	15	8.97E-04	3.87	RefSeq	PKP3	1931
chr9:14187941-14188455	515	16	8.97E-04	3.87	RefSeq	NFIB	115591
chr16:1522502-1523000	499	14	8.97E-04	3.87	RefSeq	TMEM204	3759
chr3:110153051-110153570	520	15	8.97E-04	3.87	RefSeq	GUCA1C	1798
chr13:43908340-43908843	504	14	8.97E-04	3.87	RefSeq	TSC22D1	548
chr11:6999867-7000520	654	15	8.97E-04	3.87	RefSeq	NLRP14	1591
chrX:40393985-40394512	528	14	8.97E-04	3.87	RefSeq	MED14	85237
chrX:53586837-53587354	518	15	8.97E-04	3.87	RefSeq	HUWE1	143046
chr1:144291496-144291831	336	10	8.97E-04	3.87	RefSeq	PIAS3	4151
chr1:151280226-151280732	507	14	8.97E-04	3.87	RefSeq	SPRR2D	-7
chr7:149195545-149196058	514	15	8.97E-04	3.87	ncRNA	ATP6V0E2-AS1	5827
chr1:2312574-2313069	496	14	8.97E-04	3.87	RefSeq	MORN1	0
chr2:96873743-96874241	499	15	8.97E-04	3.86	RefSeq	ANKRD23	-257
chr12:50912549-50913051	503	14	8.97E-04	3.86	RefSeq	KRT7	-170
chr6:116956402-116956898	497	14	8.97E-04	3.86	RefSeq	TRAPPC3L	16569
chr12:25600974-25601458	485	14	8.97E-04	3.86	RefSeq	LMNTD1	91306
chr8:31616162-31616651	490	14	8.97E-04	3.86	RefSeq	NRG1	-159
chr5:172025260-172025763	504	15	8.97E-04	3.86	RefSeq	NEURL1B	24379
chr6:47956295-47956957	663	19	8.97E-04	3.86	RefSeq	PTCHD4	187428
chr7:96471707-96472271	565	16	8.97E-04	3.86	RefSeq	DLX6	-955
chr5:108112094-108112696	603	16	8.97E-04	3.86	RefSeq	FER	672
chr2:108432367-108432901	535	15	8.97E-04	3.86	RefSeq	GCC2	358
chr18:2836389-2836874	486	14	8.97E-04	3.86	RefSeq	EMILIN2	-154
chr15:19335082-19335586	505	15	8.97E-04	3.86	RefSeq	POTEB2	748

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.



chr1:39565935-39566433	499	15	8.97E-04	3.86	RefSeq	MACF1	243509
chr17:370607-371098	492	14	8.97E-04	3.86	RefSeq	VPS53	193749
chrX:148428203-148428711	509	15	8.97E-04	3.86	ncRNA	LINC00893	493
chr1:199444904-199445555	652	18	8.97E-04	3.86	RefSeq	IGFN1	18328
chr2:229843261-229843754	494	13	8.97E-04	3.86	RefSeq	PID1	548
chr14:69428506-69428976	471	13	8.97E-04	3.86	RefSeq	SMOC1	12639
chr17:36646583-36647133	551	16	8.97E-04	3.86	RefSeq	KRTAP9-8	-663
chr3:155422330-155422841	512	10	8.97E-04	3.85	RefSeq	ARHGEF26	100848
chrX:33137168-33137663	496	13	8.97E-04	3.85	RefSeq	DMD	129985
chr1:58931446-58932073	628	18	9.05E-04	3.85	RefSeq	MYSM1	6263
chr19:54670343-54670844	502	14	9.05E-04	3.85	RefSeq	FLT3LG	1065
chr20:35589429-35589919	491	12	9.05E-04	3.85	RefSeq	BLCAP	0
chr15:87945600-87945987	388	11	9.05E-04	3.85	RefSeq	TICRR	25778
chr2:104831467-104831979	513	15	9.05E-04	3.85	ncRNA	LINC01158	2388
chr12:11231693-11232179	487	14	9.05E-04	3.85	RefSeq	TAS2R42	-882
chr7:122091532-122092026	495	14	9.05E-04	3.85	RefSeq	CADPS2	222024
chr4:153550616-153551097	482	14	9.05E-04	3.85	RefSeq	FBXW7	124539
chr1:43596750-43597242	493	13	9.05E-04	3.85	RefSeq	CDC20	0
chr17:77584054-77584529	476	13	9.05E-04	3.85	RefSeq	RAC3	1233
chr1:103840890-103841396	507	14	9.05E-04	3.85	RefSeq	LOC101928436	-196
chr20:31723001-31723392	392	12	9.05E-04	3.84	RefSeq	NECAB3	2534
chr11:1559805-1560304	500	14	9.05E-04	3.84	ncRNA	KRTAP5-AS1	9258
chr13:44936801-44937297	497	13	9.05E-04	3.84	RefSeq	COG3	0
chr21:37707362-37707881	520	11	9.05E-04	3.84	RefSeq	DYRK1A	45633
chr6:32246807-32247323	517	14	9.13E-04	3.84	RefSeq	AGPAT1	4572
chr7:93470065-93470583	519	15	9.21E-04	3.84	RefSeq	BET1	1044
chr10:12275121-12275639	519	15	9.29E-04	3.84	RefSeq	NUDT5	2511
chr9:127714252-127714765	514	15	9.37E-04	3.84	RefSeq	PBX3	163953
chr17:61492878-61493397	520	13	9.37E-04	3.84	RefSeq	CEP112	125278
chr11:93772509-93773024	516	15	9.37E-04	3.84	RefSeq	GPR83	1210
chr7:153375798-153376311	514	14	9.37E-04	3.84	RefSeq	DPP6	160683
chr15:20256205-20256719	515	15	9.45E-04	3.84	ncRNA	GOLGA8DP	10374
chr17:77609056-77609570	515	15	9.45E-04	3.83	RefSeq	DUS1L	7417
chr18:64654002-64654534	533	15	9.45E-04	3.83	RefSeq	CCDC102B	120531
chr15:86981971-86982460	490	13	9.45E-04	3.83	RefSeq	ISG20	-583
chr2:168704978-168705577	600	17	9.45E-04	3.83	RefSeq	STK39	106775
chr4:39454280-39454788	509	15	9.45E-04	3.83	RefSeq	UBE2K	78221
chr10:111961946-111962291	346	10	9.45E-04	3.83	RefSeq	MXI1	1967
chr3:44975511-44976002	492	14	9.45E-04	3.83	RefSeq	ZDHHC3	16677

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

chr15:80552459-80552977	519	14	9.45E-04	3.83	RefSeq	GOLGA6L10	262277
chr10:62429733-62430216	484	14	9.53E-04	3.83	ncRNA	RHOBTB1	527
chr2:218791684-218792290	607	18	9.53E-04	3.83	RefSeq	ARPC2	1319
chr5:170746738-170747255	518	15	9.53E-04	3.83	RefSeq	NPM1	-58
chr5:94442050-94442544	495	14	9.53E-04	3.83	RefSeq	MCTP1	783
chr19:51899821-51900334	514	14	9.53E-04	3.83	RefSeq	PRKD2	11891
chr17:25111247-25111735	489	14	9.53E-04	3.83	RefSeq	SSH2	169638
chr3:157493520-157494045	526	15	9.53E-04	3.83	RefSeq	KCNAB1	150075
chr6:31656497-31657033	537	15	9.53E-04	3.83	RefSeq	LTB	1149
chr12:50490780-50491495	716	21	9.53E-04	3.83	RefSeq	SCN8A	219493
chr4:71098131-71098647	517	14	9.53E-04	3.83	RefSeq	ODAM	1298
chr6:53626135-53626751	617	15	9.53E-04	3.83	RefSeq	KLHL31	11715
chr2:48702331-48702817	487	14	9.53E-04	3.83	RefSeq	GTF2A1L	3908
chr6:53765913-53766417	505	14	9.53E-04	3.83	RefSeq	LRRC1	-1320
chr2:207511513-207511998	486	14	9.53E-04	3.83	RefSeq	CPO	-525
chr6:105958161-105958652	492	14	9.53E-04	3.83	RefSeq	PREP	-468
chr14:60022360-60022844	485	14	9.53E-04	3.83	RefSeq	C14orf39	0
chr22:29421871-29422322	452	13	9.53E-04	3.83	RefSeq	OSBP2	2102
chr1:16959293-16959778	486	13	9.53E-04	3.82	RefSeq	MST1L	3785
chr19:993789-994284	496	14	9.53E-04	3.82	RefSeq	ABCA7	2687
chr1:166170227-166170720	494	14	9.53E-04	3.82	RefSeq	MPC2	2212
chr20:56157836-56158413	578	16	9.53E-04	3.82	RefSeq	C20orf85	-976
chr10:22674496-22674996	501	14	9.53E-04	3.82	RefSeq	SPAG6	116
chr6:42123700-42124281	582	17	9.53E-04	3.82	RefSeq	CCND3	330
chr4:77125835-77126269	435	13	9.53E-04	3.82	RefSeq	SDAD1	4871
chr10:30695199-30695687	489	14	9.61E-04	3.82	ncRNA	GOLGA2P6	5156
chrX:101281865-101282379	515	15	9.61E-04	3.82	RefSeq	TCEAL6	1666
chr15:61672306-61672818	513	13	9.61E-04	3.82	RefSeq	USP3	88543
chr16:18479726-18480239	514	14	9.61E-04	3.82	RefSeq	NOMO2	697
chr4:123389562-123390192	631	18	9.61E-04	3.82	RefSeq	KIAA1109	78354
chr12:55130284-55130800	517	15	9.61E-04	3.82	RefSeq	TIMELESS	-816
chr21:42793705-42794222	518	15	9.61E-04	3.82	RefSeq	SLC37A1	894
chr8:57244153-57244645	493	14	9.61E-04	3.82	RefSeq	PLAG1	41769
chr10:16601835-16602498	664	16	9.61E-04	3.82	RefSeq	C1QL3	1513
chr17:34814743-34815257	515	14	9.69E-04	3.82	RefSeq	MED1	45797
chr16:65062244-65062756	513	15	9.69E-04	3.82	RefSeq	BEAN1	43543
chr18:32022968-32023475	508	14	9.69E-04	3.82	RefSeq	MOCOS	1490
chrX:119576711-119577211	501	14	9.77E-04	3.81	RefSeq	CUL4B	1635
chr19:45553660-45554187	528	16	9.77E-04	3.81	RefSeq	PLD3	7488





chr7:44051506-44052006	501	14	9.77E-04	3.81	RefSeq	DBNL	742
chr21:42606451-42606959	509	14	9.77E-04	3.81	RefSeq	TFF3	1817
chr11:102217478-102217980	503	14	9.77E-04	3.81	RefSeq	MMP3	1573
chr1:159120147-159120652	506	14	9.77E-04	3.81	RefSeq	ITLN1	933
chr5:122400470-122400955	486	13	9.77E-04	3.81	RefSeq	PPIC	-145
chr5:112099479-112099966	488	14	9.77E-04	3.81	RefSeq	APC	-1489
chr22:29694641-29695222	582	15	9.77E-04	3.81	RefSeq	MORC2	-453
chr6:35419497-35419997	501	14	9.86E-04	3.81	RefSeq	PPARD	1184
chr3:153496691-153497205	515	15	9.86E-04	3.81	RefSeq	MBNL1	28172
chrY:9298041-9298555	515	15	9.86E-04	3.81	RefSeq	TSPY3	2011
chr5:159785285-159785626	342	10	9.86E-04	3.81	RefSeq	PTTG1	3790
chr3:68122407-68122910	504	15	9.94E-04	3.81	RefSeq	FAM19A1	-514
chr2:105727200-105727590	391	11	9.94E-04	3.81	RefSeq	NCK2	-362
chr22:36682710-36683195	486	14	9.94E-04	-3.57	RefSeq	POLR2F	3094
chr3:156278868-156279433	566	15	9.86E-04	-3.57	RefSeq	MME	-697
chr3:180272616-180273081	466	14	9.86E-04	-3.57	RefSeq	ZMAT3	-265
chr6:161333876-161334374	499	15	9.86E-04	-3.57	RefSeq	MAP3K4	1127
chr11:64642623-64643094	472	14	9.86E-04	-3.57	RefSeq	ZNHIT2	-876
chr1:32436811-32437308	498	15	9.86E-04	-3.57	RefSeq	CCDC28B	-1266
chr6:41992352-41992772	421	12	9.86E-04	-3.57	RefSeq	MED20	4084
chr21:44956800-44957318	519	12	9.86E-04	-3.57	RefSeq	TSPEAR	-876
chr17:24013178-24013749	572	17	9.86E-04	-3.57	RefSeq	SUPT6H	0
chr19:60556282-60556812	531	15	9.86E-04	-3.57	RefSeq	COX6B2	1183
chr9:134922064-134922572	509	15	9.86E-04	-3.57	RefSeq	GTF3C5	26181
chr6:165915440-165915932	493	14	9.77E-04	-3.57	RefSeq	PDE10A	79647
chr22:23797280-23797882	603	16	9.77E-04	-3.57	RefSeq	KIAA1671	43339
chr2:203444893-203445472	580	16	9.77E-04	-3.57	RefSeq	ICA1L	0
chr17:20192014-20192525	512	15	9.77E-04	-3.58	ncRNA	CCDC144CP	26935
chr5:141976303-141976797	495	12	9.77E-04	-3.58	RefSeq	FGF1	69448
chr12:52964507-52965002	496	14	9.77E-04	-3.58	RefSeq	HNRNPA1	3752
chr6:88237982-88238482	501	14	9.77E-04	-3.58	RefSeq	SLC35A1	-880
chr12:130005749-130006259	511	15	9.69E-04	-3.58	RefSeq	GPR133	1344
chr9:134448368-134448940	573	17	9.69E-04	-3.58	RefSeq	BARHL1	554
chr17:4096155-4096645	491	14	9.69E-04	-3.58	RefSeq	ANKFY1	17247
chr22:29103039-29103645	607	17	9.69E-04	-3.58	ncRNA	KIAA1656	250
chrX:48640438-48640940	503	14	9.61E-04	-3.58	RefSeq	PQBP1	299
chr1:113419374-113419783	410	12	9.61E-04	-3.58	RefSeq	LRIG2	2020
chr14:104430309-104430811	503	15	9.61E-04	-3.58	RefSeq	CEP170B	27614
chr1:117016052-117016414	363	10	9.61E-04	-3.58	ncRNA	MIR320B1	158

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

chr2:169252791-169253309	519	12	9.61E-04	-3.58	RefSeq	CERS6	231786
chr3:125294404-125294909	506	14	9.61E-04	-3.58	RefSeq	KALRN	-1339
chr1:778629-779174	546	16	9.61E-04	-3.58	ncRNA	LINC01128	25795
chr16:21378824-21379274	451	13	9.61E-04	-3.58	ncRNA	SMG1P3	41830
chr15:40539629-40540052	424	13	9.61E-04	-3.58	RefSeq	ZNF106	30636
chr13:107671715-107672163	449	13	9.61E-04	-3.58	RefSeq	ABHD13	2951
chr15:28484259-28484777	519	14	9.61E-04	-3.58	RefSeq	GOLGA8R	8979
chr7:5886023-5886534	512	15	9.61E-04	-3.58	RefSeq	OCM	-421
chr1:167825940-167826442	503	14	9.61E-04	-3.58	RefSeq	SELP	39560
chr19:41194157-41194539	383	10	9.61E-04	-3.58	RefSeq	ALKBH6	2447
chrX:49065674-49066173	500	14	9.61E-04	-3.58	RefSeq	GAGE12J	221
chr21:36785283-36785793	511	15	9.61E-04	-3.58	RefSeq	CLDN14	84945
chr16:22734956-22735550	595	16	9.61E-04	-3.58	RefSeq	HS3ST2	1595
chr21:37302201-37302616	416	12	9.61E-04	-3.58	RefSeq	RIPPLY3	1468
chr13:31892106-31892678	573	16	9.61E-04	-3.58	RefSeq	N4BP2L1	7638
chr1:200028526-200029053	528	15	9.61E-04	-3.58	RefSeq	NAV1	52940
chr7:127929039-127929558	520	11	9.61E-04	-3.58	RefSeq	METTL2B	25020
chr4:9707730-9708224	495	14	9.61E-04	-3.58	RefSeq	WDR1	19448
chr16:30680078-30680570	493	15	9.61E-04	-3.58	RefSeq	C16orf93	497
chr7:154492609-154493092	484	13	9.61E-04	-3.58	RefSeq	HTR5A	0
chr21:34474865-34475364	500	14	9.61E-04	-3.58	ncRNA	LINC00310	17
chr2:94852518-94853009	492	14	9.61E-04	-3.59	ncRNA	ANKRD20A8P	33539
chr4:146242385-146242944	560	15	9.61E-04	-3.59	RefSeq	ABCE1	3779
chr13:113887539-113888119	581	16	9.61E-04	-3.59	RefSeq	RASA3	28079
chr14:76914230-76914742	513	15	9.61E-04	-3.59	RefSeq	SAMD15	715
chr14:76862443-76862957	515	15	9.61E-04	-3.59	RefSeq	GSTZ1	4984
chr17:71908775-71909216	442	13	9.61E-04	-3.59	RefSeq	UBE2O	51668
chr5:34714661-34715157	497	14	9.61E-04	-3.59	RefSeq	RAI14	22308
chr1:111479818-111480328	511	15	9.61E-04	-3.59	RefSeq	DRAM2	4034
chr2:108970359-108970871	513	15	9.61E-04	-3.59	RefSeq	EDAR	1390
chr14:101091395-101091775	381	12	9.61E-04	-3.59	ncRNA	DIO3OS	0
chr17:4967647-4968200	554	12	9.53E-04	-3.59	RefSeq	ZNF232	-525
chr16:24476134-24476650	517	12	9.53E-04	-3.59	RefSeq	RBBP6	17725
chr17:5288541-5289043	503	14	9.53E-04	-3.59	RefSeq	DHX33	24062
chr6_cox_hap1:3946684-3947200	517	12	9.53E-04	-3.59	RefSeq	HLA-DRB1	861
chr1:144025342-144025959	618	18	9.37E-04	-3.59	RefSeq	NBPF12	720390
chr21:45532713-45533185	473	14	9.37E-04	-3.59	RefSeq	POFUT2	-473
chr5:77108394-77108781	388	11	9.37E-04	-3.59	RefSeq	TBCA	-452
chr10:118599272-118599766	495	14	9.29E-04	-3.59	RefSeq	ENO4	259

chr10:64249988-64250476	489	14	9.29E-04	-3.59	RefSeq	EGR2	-1054
chr12:122870587-122871091	505	15	9.29E-04	-3.59	RefSeq	DNAH10	57592
chr1:1642537-1643020	484	14	9.29E-04	-3.59	RefSeq	CDK11B	2700
chr6:41859965-41860694	730	20	9.29E-04	-3.59	RefSeq	PRICKLE4	3487
chr10:63475471-63475967	497	14	9.29E-04	-3.59	RefSeq	ARID5B	144452
chrX:119928315-119928797	483	14	9.29E-04	-3.59	RefSeq	CT47A10	18523
chr3:122711286-122711805	520	15	9.29E-04	-3.59	RefSeq	POLQ	35739
chr12:119394723-119395265	543	15	9.29E-04	-3.59	RefSeq	DYNLL1	2680
chr17:32925410-32925928	519	15	9.21E-04	-3.59	RefSeq	DUSP14	1346
chr1:159311414-159311818	405	12	9.21E-04	-3.59	RefSeq	PVRL4	14192
chr11:5226230-5226743	514	13	9.21E-04	-3.59	RefSeq	HBG1	921
chr19:40959352-40959845	494	14	9.21E-04	-3.6	RefSeq	ARHGAP33	1095
chr9:116124638-116125160	523	15	9.21E-04	-3.6	RefSeq	ORM1	0
chr16:417375-417801	427	12	9.21E-04	-3.6	RefSeq	RAB11FIP3	1706
chr3:61701397-61701897	501	15	9.21E-04	-3.6	RefSeq	PTPRG	179114
chr5:60031242-60031742	501	14	9.21E-04	-3.6	RefSeq	DEPDC1B	9
chr18:12992639-12993141	503	14	9.21E-04	-3.6	RefSeq	CEP192	11278
chr1:19625062-19625411	350	11	9.13E-04	-3.6	RefSeq	CAPZB	59312
chr1:149419841-149420326	486	14	9.05E-04	-3.6	RefSeq	VPS72	8988
chr21:32165826-32166326	501	14	9.05E-04	-3.6	RefSeq	HUNK	-1173
chr7:102006915-102007278	364	11	9.05E-04	-3.6	RefSeq	RASA4	37148
chr8:7106531-7107161	631	19	9.05E-04	-3.6	ncRNA	LINC00965	1264
chr5:145586707-145587292	586	13	9.05E-04	-3.6	RefSeq	RBM27	23351
chr16:22017017-22017501	485	14	9.05E-04	-3.6	RefSeq	VWA3A	5657
chr3:48460166-48460666	501	14	9.05E-04	-3.6	RefSeq	TMA7	3476
chr10:11948611-11948960	350	10	9.05E-04	-3.6	RefSeq	PROSER2	43208
chr4:113732225-113732682	458	13	9.05E-04	-3.6	RefSeq	ZGRF1	44919
chr1:153505921-153506296	376	11	9.05E-04	-3.6	RefSeq	CLK2	3649
chr1:153454445-153454950	506	14	9.05E-04	-3.6	ncRNA	GBAP1	9000
chr17:73614611-73615130	520	13	9.05E-04	-3.6	RefSeq	TNRC6C	102698
chr4:81336193-81336828	636	17	9.05E-04	-3.6	RefSeq	PRDM8	-853
chr2:187265621-187266098	478	12	9.05E-04	-3.6	RefSeq	FAM171B	-936
chr6:151302844-151303386	543	16	9.05E-04	-3.6	RefSeq	MTHFD1L	74336
chr1:109433535-109433971	437	12	9.05E-04	-3.6	RefSeq	TMEM167B	-955
chr3:49429995-49430529	535	16	9.05E-04	-3.6	RefSeq	AMT	4587
chr17:37370586-37371109	524	15	9.05E-04	-3.6	RefSeq	TTC25	30184
chr10:134871118-134871634	517	15	8.97E-04	-3.6	RefSeq	KNDC1	47157
chr2:42578558-42578978	421	12	8.97E-04	-3.6	RefSeq	MTA3	3345
chr3:52377478-52377980	503	14	8.97E-04	-3.6	RefSeq	DNAH1	52103

chr22:19125569-19126075	507	14	8.97E-04	-3.6	RefSeq	KLHL22	54096
chr1:154604611-154604928	318	10	8.97E-04	-3.61	RefSeq	RHBG	-676
chr6:154398141-154398655	515	14	8.97E-04	-3.61	RefSeq	OPRM1	24817
chr6:13735136-13735523	388	11	8.97E-04	-3.61	RefSeq	RANBP9	84253
chr13:77009775-77010226	452	13	8.97E-04	-3.61	RefSeq	SCEL	1965
chr16:2978430-2978944	515	15	8.97E-04	-3.61	ncRNA	LINC00514	-112
chr19:11171965-11172524	560	16	8.97E-04	-3.61	RefSeq	DOCK6	61645
chr12:119828002-119828538	537	16	8.97E-04	-3.61	RefSeq	SPPL3	-1463
chr6:43652929-43653447	519	15	8.97E-04	-3.61	RefSeq	POLH	1073
chr3:12182039-12182519	481	10	8.97E-04	-3.61	RefSeq	SYN2	161205
chrX:47938611-47939107	497	10	8.97E-04	-3.61	RefSeq	SSX5	2037
chr3:198769897-198770254	358	11	8.89E-04	-3.61	RefSeq	BDH1	14338
chr9:662594-663182	589	17	8.89E-04	-3.61	RefSeq	KANK1	202300
chr3:46515986-46516475	490	14	8.89E-04	-3.61	RefSeq	RTP3	1497
chr18:18982328-18982846	519	15	8.89E-04	-3.61	RefSeq	CABLES1	12603
chr3:101315818-101316347	530	14	8.89E-04	-3.61	RefSeq	FILIP1L	0
chr15:80985100-80985632	533	13	8.89E-04	-3.61	ncRNA	GOLGA6L17P	394042
chr19:9185732-9186291	560	16	8.89E-04	-3.61	RefSeq	OR7D4	257
chr5:151044917-151045455	539	11	8.89E-04	-3.61	RefSeq	SPARC	1354
chr4:24768631-24769136	506	14	8.89E-04	-3.61	RefSeq	SEPSECS	2167
chr19:17698454-17698990	537	16	8.81E-04	-3.61	RefSeq	MAP1S	7151
chr12:130041560-130041971	412	12	8.72E-04	-3.61	RefSeq	GPR133	37155
chr5:10300791-10301337	547	16	8.72E-04	-3.61	RefSeq	FAM173B	1685
chr18:19339323-19339787	465	14	8.72E-04	-3.61	RefSeq	C18orf8	1891
chr1:15563839-15564379	541	15	8.72E-04	-3.61	RefSeq	FHAD1	117484
chr12:10255424-10255795	372	11	8.72E-04	-3.61	RefSeq	GABARAPL1	-961
chr4:8968028-8968670	643	18	8.72E-04	-3.61	RefSeq	USP17L10	-537
chr5:31571697-31572094	398	12	8.72E-04	-3.61	RefSeq	C5orf22	3567
chr1:8408002-8408452	451	13	8.72E-04	-3.61	RefSeq	RERE	391835
chr2:70377714-70378123	410	12	8.72E-04	-3.61	RefSeq	FAM136A	4602
chrX:101518802-101519178	377	11	8.72E-04	-3.61	RefSeq	NXF2B	62408
chr2:219532187-219532640	454	12	8.72E-04	-3.62	RefSeq	CDK5R2	0
chr1:85104530-85105024	495	14	8.72E-04	-3.62	RefSeq	LPAR3	26461
chr12:63439820-63440315	496	14	8.72E-04	-3.62	RefSeq	GNS	-326
chr19:12524365-12524765	401	11	8.64E-04	-3.62	RefSeq	ZNF564	-1008
chrX:148481820-148482357	538	16	8.64E-04	-3.62	RefSeq	HSFX2	2413
chr15:63130968-63131478	511	13	8.64E-04	-3.62	RefSeq	SLC51B	6207
chr1:195920902-195921373	472	14	8.64E-04	-3.62	RefSeq	DENND1B	89874
chr18:53406004-53406588	585	13	8.64E-04	-3.62	RefSeq	FECH	-1036

chr6:112774430-112774916	487	12	8.64E-04	-3.62	RefSeq	RFPL4B	-309
chr2:237988004-237988355	352	11	8.64E-04	-3.62	RefSeq	COL6A3	-414
chr2:61987240-61987720	481	14	8.64E-04	-3.62	RefSeq	COMMD1	933
chr1:28156711-28157236	526	11	8.64E-04	-3.62	RefSeq	SMPDL3B	22620
chr20:3096654-3097160	507	14	8.64E-04	-3.62	RefSeq	LZTS3	5079
chr15:53997271-53997773	503	15	8.64E-04	-3.62	RefSeq	NEDD4	-649
chr2:153233514-153234020	507	14	8.64E-04	-3.62	RefSeq	PRPF40A	48202
chr6:30700624-30700953	330	10	8.64E-04	-3.62	RefSeq	MRPS18B	7159
chrX:119921117-119921631	515	15	8.64E-04	-3.62	RefSeq	CT47A10	25689
chr5:175989352-175989763	412	12	8.64E-04	-3.62	RefSeq	SNCB	401
chr1:151864415-151864925	511	11	8.64E-04	-3.63	RefSeq	S100A13	8268
chr17:45911906-45912389	484	14	8.64E-04	-3.63	RefSeq	RSAD1	717
chr15:32093935-32094655	721	21	8.64E-04	-3.63	RefSeq	CHRM5	45554
chr8:81157310-81157881	572	16	8.64E-04	-3.63	RefSeq	TPD52	88569
chr12:68951721-68952209	489	14	8.64E-04	-3.63	RefSeq	CNOT2	28644
chr12:52086410-52086863	454	13	8.64E-04	-3.63	RefSeq	SP1	26164
chr11:63767964-63768519	556	15	8.64E-04	-3.63	RefSeq	FKBP2	2784
chr13:24647342-24647846	505	15	8.64E-04	-3.63	ncRNA	LINC00463	4294
chr5:150926885-150927483	599	17	8.64E-04	-3.63	RefSeq	FAT2	1216
chr16:56787260-56787704	445	13	8.64E-04	-3.63	RefSeq	CSNK2A2	1580
chr20:61759593-61760074	482	14	8.64E-04	-3.63	RefSeq	RTEL1	0
chr9:35719270-35719777	508	15	8.64E-04	-3.63	RefSeq	TLN1	2616
chr20:25938341-25938911	571	16	8.64E-04	-3.63	ncRNA	LOC100134868	0
chr2:119842731-119843250	520	15	8.48E-04	-3.63	RefSeq	DBI	1761
chr20:56846479-56847059	581	17	8.48E-04	-3.63	RefSeq	GNAS	-1131
chr17:38397099-38397460	362	11	8.48E-04	-3.63	RefSeq	RUNDC1	10991
chr6:37056187-37056680	494	14	8.40E-04	-3.63	RefSeq	MTCH1	5626
chr6:44367915-44368456	542	15	8.40E-04	-3.63	RefSeq	TCTE1	4981
chrX:100193722-100194255	534	15	8.40E-04	-3.63	RefSeq	TRMT2B	0
chr14:57817736-57818227	492	14	8.40E-04	-3.63	ncRNA	FLJ31306	16382
chr8:145692927-145693462	536	15	8.40E-04	-3.63	RefSeq	PPP1R16A	10
chr1:54864600-54865095	496	11	8.40E-04	-3.63	RefSeq	ACOT11	78205
chr5:155690354-155690866	513	10	8.40E-04	-3.63	RefSeq	SGCD	4009
chr14:75191695-75192210	516	10	8.40E-04	-3.63	RefSeq	C14orf1	5082
chr1:165904499-165905003	505	15	8.40E-04	-3.63	RefSeq	RCS1	38401
chr19:12048076-12048561	486	14	8.32E-04	-3.63	RefSeq	ZNF844	11530
chr16:84388779-84389190	412	12	8.32E-04	-3.63	RefSeq	EMC8	1460
chr22:21558584-21558928	345	10	8.32E-04	-3.63	RefSeq	IGLL5	-1032
chr11:64289850-64290342	493	13	8.24E-04	-3.64	RefSeq	SF1	12173

chr14:55150246-55150736	491	14	8.24E-04	-3.64	RefSeq	KTN1	33568
chr8:30132372-30132889	518	15	8.24E-04	-3.64	RefSeq	DCTN6	-466
chr9:115080658-115081163	506	14	8.24E-04	-3.64	RefSeq	PRPF4	2923
chr14:23490761-23491255	495	15	8.24E-04	-3.64	ncRNA	DHRS4-AS1	1992
chr1:159465727-159466245	519	15	8.24E-04	-3.64	RefSeq	NR1I3	8380
chr11:133276463-133276878	416	12	8.24E-04	-3.64	ncRNA	MIR4697HG	0
chr15:56622683-56623104	422	12	8.24E-04	-3.64	RefSeq	LIPC	111216
chr3:159310440-159310981	542	15	8.24E-04	-3.64	RefSeq	RSRC1	0
chr16:21729267-21729717	451	13	8.24E-04	-3.64	ncRNA	RRN3P1	8280
chr22:40404438-40404903	466	13	8.24E-04	-3.64	RefSeq	NHP2L1	9957
chr22:36705453-36705941	489	14	8.16E-04	-3.64	RefSeq	POLR2F	25837
chr7:77271920-77272290	371	11	8.16E-04	-3.64	RefSeq	PHTF2	5875
chr22:29051599-29052115	517	15	8.16E-04	-3.64	RefSeq	TBC1D10A	841
chr1:160128668-160129024	357	11	8.16E-04	-3.64	RefSeq	ATF6	126010
chr17:41065924-41066408	485	14	8.16E-04	-3.64	RefSeq	CRHR1	12431
chr11:35112614-35113107	494	14	8.16E-04	-3.64	ncRNA	LOC100507144	3049
chr1:13541432-13541949	518	15	8.00E-04	-3.64	RefSeq	PRAMEF14	4150
chr1:16175557-16176073	517	14	8.00E-04	-3.64	RefSeq	ZBTB17	-342
chr1:109833359-109833859	501	14	8.00E-04	-3.64	RefSeq	ATXN7L2	5275
chr12:65149875-65150370	496	14	8.00E-04	-3.65	RefSeq	GRIP1	208823
chr2:64287156-64287642	487	14	8.00E-04	-3.65	ncRNA	LINC00309	-1032
chr13:98025073-98025562	490	14	8.00E-04	-3.65	RefSeq	STK24	1845
chr21:46801892-46802460	569	16	8.00E-04	-3.65	RefSeq	DIP2A	98602
chr7:98763211-98763629	419	12	8.00E-04	-3.65	RefSeq	ARPC1A	1779
chr5:70916952-70917591	640	18	8.00E-04	-3.65	RefSeq	MCCC2	-1280
chrX:47999303-47999834	532	15	8.00E-04	-3.65	RefSeq	SSX1	0
chr19:38053847-38054349	503	14	8.00E-04	-3.65	RefSeq	SLC7A9	-1323
chr8:7416316-7416824	509	15	8.00E-04	-3.65	ncRNA	FAM90A7P	2507
chr22:18455232-18455719	488	14	8.00E-04	-3.65	RefSeq	DGCR8	7477
chr11:32568523-32568944	422	12	8.00E-04	-3.65	RefSeq	EIF3M	6634
chr1:178112486-178113001	516	16	8.00E-04	-3.65	RefSeq	TOR1AIP2	564
chr19:9407970-9408441	472	13	8.00E-04	-3.65	RefSeq	ZNF266	-715
chr3:15442980-15443521	542	15	8.00E-04	-3.65	RefSeq	METTL6	538
chr7:66382088-66382667	580	16	8.00E-04	-3.65	ncRNA	PMS2P4	22198
chr19:60173083-60173524	442	13	8.00E-04	-3.65	RefSeq	NLRP2	4619
chr18:71054913-71055427	515	15	8.00E-04	-3.65	RefSeq	TSHZ1	3215
chr11:64706738-64707233	496	14	7.84E-04	-3.65	RefSeq	CAPN1	1476
chr3:46715927-46716445	519	11	7.84E-04	-3.65	RefSeq	TMIE	-1382
chr11:109665191-109665537	347	10	7.84E-04	-3.65	RefSeq	RDX	7111

chr18:42796253-42796745	493	14	7.84E-04	-3.65	RefSeq	TCEB3CL	1625
chr12:95317905-95318418	514	14	7.84E-04	-3.66	RefSeq	CDK17	80
chr19:4469649-4470185	537	15	7.84E-04	-3.66	RefSeq	PLIN4	-932
chr12:121752621-121753118	498	14	7.84E-04	-3.66	RefSeq	HCAR2	740
chr20:48890389-48890759	371	11	7.84E-04	-3.66	RefSeq	BCAS4	45551
chr6:167451196-167451680	485	13	7.67E-04	-3.66	RefSeq	CCR6	5911
chr6:134414122-134414608	487	14	7.67E-04	-3.66	RefSeq	SLC2A12	875
chr10:11691403-11691889	487	14	7.67E-04	-3.66	RefSeq	USP6NL	1906
chr6:4947795-4948284	490	15	7.67E-04	-3.66	RefSeq	RPP40	1013
chr2:159727777-159728367	591	17	7.67E-04	-3.66	RefSeq	TANC1	194385
chr1:59747775-59748249	475	12	7.67E-04	-3.66	RefSeq	FGGY	212562
chr1:7921205-7921667	463	14	7.67E-04	-3.66	RefSeq	TNFRSF9	4146
chrY:5266052-5266568	517	13	7.67E-04	-3.66	RefSeq	PCDH11Y	281921
chr17:20167004-20167484	481	14	7.67E-04	-3.66	ncRNA	CCDC144CP	1925
chr15:63146897-63147405	509	15	7.67E-04	-3.66	RefSeq	RASL12	37
chr5:80568733-80569234	502	15	7.67E-04	-3.66	RefSeq	CKMT2	3838
chr16:12080284-12080785	502	15	7.67E-04	-3.66	RefSeq	SNX29	102192
chr19:57313811-57314186	376	11	7.67E-04	-3.66	RefSeq	ZNF616	20818
chr9:37872357-37872832	476	14	7.67E-04	-3.66	ncRNA	SLC25A51	21519
chr17:3515214-3515718	505	11	7.59E-04	-3.66	RefSeq	TAX1BP3	3005
chr10:101364412-101364800	389	12	7.59E-04	-3.67	RefSeq	SLC25A28	5412
chr16:561640-562256	617	18	7.59E-04	-3.67	RefSeq	PIGQ	1671
chr14:93322513-93322853	341	10	7.59E-04	-3.67	RefSeq	PRIMA1	1667
chrX:70349844-70350300	457	13	7.59E-04	-3.67	RefSeq	GJB1	-1487
chr15:20443098-20443610	513	15	7.51E-04	-3.67	RefSeq	CYFIP1	-480
chr9:34600552-34601058	507	14	7.51E-04	-3.67	RefSeq	RPP25L	1053
chr11:117717500-117717999	500	12	7.51E-04	-3.67	RefSeq	CD3D	671
chr9:108727403-108727909	507	13	7.51E-04	-3.67	RefSeq	ZNF462	62204
chr1:154665923-154666426	504	14	7.51E-04	-3.67	RefSeq	C1orf61	-114
chr16:22397255-22397783	529	15	7.51E-04	-3.67	ncRNA	SMG1P1	41425
chr4:77361122-77361497	376	11	7.51E-04	-3.67	RefSeq	FAM47E	6905
chr8:144970379-144970894	516	15	7.51E-04	-3.67	RefSeq	PUF60	12374
chrX:100525325-100525879	555	16	7.51E-04	-3.67	RefSeq	BTK	1990
chr1:110253236-110253958	723	21	7.43E-04	-3.67	RefSeq	CSF1	-798
chr13:109759608-109760031	424	12	7.43E-04	-3.67	RefSeq	COL4A2	1976
chr11:56066740-56067232	493	14	7.43E-04	-3.67	RefSeq	OR5M11	78
chr17:37251387-37252035	649	19	7.43E-04	-3.67	RefSeq	KLHL10	3818
chr14:75906497-75907009	513	13	7.43E-04	-3.67	RefSeq	ESRRB	-434
chr6:150111658-150112209	552	15	7.43E-04	-3.67	RefSeq	PCMT1	-315



chr3:47396205-47396732	528	12	7.43E-04	-3.68	RefSeq	PTPN23	-763
chr19:57561615-57562130	516	15	7.43E-04	-3.68	RefSeq	ZNF610	30305
chr7:148358159-148358562	404	12	7.43E-04	-3.68	RefSeq	PDIA4	-1443
chr12:115658333-115658746	414	12	7.43E-04	-3.68	RefSeq	C12orf49	1481
chr5:135502822-135503270	449	13	7.43E-04	-3.68	RefSeq	SMAD5	6389
chr18:42955263-42955764	502	14	7.43E-04	-3.68	RefSeq	IER3IP1	980
chr15:32616255-32616781	527	14	7.43E-04	-3.68	RefSeq	GOLGA8B	-740
chr7:153374599-153375111	513	15	7.43E-04	-3.68	RefSeq	DPP6	159484
chr17:37639550-37640100	551	16	7.35E-04	-3.68	RefSeq	STAT5B	41851
chr11:64275229-64275752	524	15	7.35E-04	-3.68	RefSeq	PYGM	9012
chr2:37045791-37046306	516	14	7.35E-04	-3.68	RefSeq	STRN	814
chr8:6411624-6412193	570	16	7.35E-04	-3.68	RefSeq	MCPH1	160103
chr8:27220096-27220607	512	15	7.35E-04	-3.68	RefSeq	TRIM35	4145
chr15:79451879-79452587	709	19	7.35E-04	-3.68	RefSeq	TMC3	887
chr16:55777631-55778134	504	13	7.35E-04	-3.68	RefSeq	FAM192A	-153
chr10:7872105-7872647	543	14	7.35E-04	-3.68	RefSeq	ATP5C1	2006
chr3:47528255-47528719	465	11	7.35E-04	-3.68	RefSeq	ELP6	1485
chr16:27123898-27124335	438	13	7.35E-04	-3.68	RefSeq	KDM8	1101
chr2:207015852-207016356	505	14	7.35E-04	-3.68	RefSeq	ADAM23	-257
chr8:37848013-37848532	520	15	7.35E-04	-3.68	RefSeq	RAB11FIP1	27642
chr16:21338880-21339355	476	14	7.35E-04	-3.68	RefSeq	NPIP3	4805
chr14:52262583-52263089	507	15	7.27E-04	-3.68	RefSeq	PSMC6	18937
chr1:181364326-181364816	491	13	7.27E-04	-3.68	RefSeq	LAMC1	105108
chr1:150148607-150149123	517	14	7.27E-04	-3.69	RefSeq	THEM4	0
chr8:36860722-36861113	392	11	7.27E-04	-3.69	RefSeq	KCNU1	99722
chr20:30071531-30072033	503	15	7.27E-04	-3.69	RefSeq	CCM2L	9625
chr19:36467437-36467922	486	14	7.27E-04	-3.69	RefSeq	TSHZ3	64109
chr6:10807564-10808001	438	13	7.27E-04	-3.69	RefSeq	PAK1IP1	4390
chr2:54927854-54928367	514	15	7.27E-04	-3.69	RefSeq	EML6	122201
chr22:30922585-30923088	504	14	7.27E-04	-3.69	RefSeq	RFPL2	6377
chr20:56990897-56991482	586	12	7.27E-04	-3.69	RefSeq	NELFCD	1239
chr11:66028548-66029065	518	15	7.27E-04	-3.69	RefSeq	DPP3	24488
chr11:64404713-64405192	480	13	7.19E-04	-3.69	RefSeq	EHD1	-951
chr5:11215541-11216058	518	14	7.19E-04	-3.69	RefSeq	CTNND2	425972
chr5:60704835-60705354	520	12	7.11E-04	-3.69	RefSeq	ZSWIM6	40978
chr15:30486350-30486826	477	14	7.11E-04	-3.69	ncRNA	ULK4P1	27717
chr11:5233896-5234337	442	10	7.11E-04	-3.69	RefSeq	HBG2	-1308
chr15:26232444-26232976	533	15	7.11E-04	-3.69	RefSeq	HERC2	7918
chr11:71487902-71488417	516	15	7.03E-04	-3.69	RefSeq	LRTOMT	18877

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.



chr4:109762844-109763360	517	14	7.03E-04	-3.69	RefSeq	RPL34	1673
chr8:12327753-12328262	510	15	7.03E-04	-3.69	RefSeq	FAM86B2	9962
chrX:132633857-132634313	457	14	6.87E-04	-3.69	RefSeq	GPC3	313027
chr2:25118880-25119387	508	14	6.79E-04	-3.7	RefSeq	EFR3B	403
chr9:42999421-43000119	699	18	6.79E-04	-3.7	ncRNA	GXYLT1P3	-1027
chr10:13667262-13667718	457	13	6.79E-04	-3.7	RefSeq	PRPF18	-1227
chr5:95184141-95184657	517	15	6.79E-04	-3.7	RefSeq	GLRX	0
chr14:95774552-95775208	657	18	6.79E-04	-3.7	RefSeq	BDKRB2	33664
chr17:41949002-41949382	381	11	6.79E-04	-3.7	RefSeq	LRRC37A2	3610
chr16:24931727-24932141	415	12	6.79E-04	-3.7	RefSeq	ARHGAP17	2060
chr5:138665274-138665687	414	12	6.79E-04	-3.7	RefSeq	MATR3	27934
chr14:102872682-102873368	687	20	6.79E-04	-3.7	RefSeq	EIF5	2590
chr4:280119-280672	554	12	6.79E-04	-3.7	RefSeq	ZNF732	-174
chr3:152493369-152494013	645	19	6.79E-04	-3.7	RefSeq	MED12L	206094
chr19:9982912-9983263	352	11	6.79E-04	-3.7	RefSeq	COL5A3	-764
chr3:180270514-180271086	573	16	6.79E-04	-3.7	RefSeq	ZMAT3	1265
chr1:242582995-242583550	556	12	6.79E-04	-3.7	RefSeq	C1orf100	435
chr11:89219291-89219784	494	13	6.79E-04	-3.7	ncRNA	TRIM53AP	4478
chr10:15171932-15172672	741	21	6.79E-04	-3.71	RefSeq	ACBD7	-1150
chr3:62436061-62436599	539	13	6.79E-04	-3.71	RefSeq	CADPS	399506
chr6:26038319-26038821	503	14	6.70E-04	-3.71	RefSeq	SLC17A2	113
chr16:30153073-30153496	424	13	6.70E-04	-3.71	ncRNA	LOC613037	10938
chr5:71658420-71659019	600	17	6.62E-04	-3.71	RefSeq	PTCD2	6470
chr1:203581791-203582282	492	14	6.62E-04	-3.71	RefSeq	KLHDC8A	10560
chrX:49186373-49186711	339	10	6.62E-04	-3.71	RefSeq	GAGE12F	2683
chrX:55531277-55531650	374	11	6.62E-04	-3.71	RefSeq	USP51	707
chr7:138173750-138174141	392	11	6.62E-04	-3.71	RefSeq	KIAA1549	142464
chr11:33846365-33846902	538	15	6.54E-04	-3.71	RefSeq	LMO2	1184
chr22:48687555-48687872	318	10	6.54E-04	-3.71	RefSeq	ALG12	10239
chr17:54040951-54041462	512	15	6.54E-04	-3.71	RefSeq	TEX14	82954
chr14:22522378-22522735	358	10	6.54E-04	-3.72	RefSeq	AJUBA	-686
chr6:49787877-49788377	501	15	6.54E-04	-3.72	RefSeq	CRISP2	886
chr1:90166764-90167347	584	16	6.54E-04	-3.72	RefSeq	LRRC8D	107603
chr8:120290457-120290953	497	14	6.54E-04	-3.72	RefSeq	MAL2	666
chr10:126420857-126421408	552	15	6.54E-04	-3.72	RefSeq	FAM53B	1513
chr2:206711425-206711787	363	11	6.46E-04	-3.72	RefSeq	NDUFS1	20702
chr22:45466015-45466529	515	15	6.46E-04	-3.72	RefSeq	CERK	46288
chr9:98838511-98838917	407	12	6.46E-04	-3.72	RefSeq	CTSV	2830
chr11:17255652-17256169	518	14	6.46E-04	-3.72	RefSeq	NUCB2	790

chr16:1869467-1869963	497	15	6.38E-04	-3.72	ncRNA	LINC00254	4271
chr3:197121675-197122168	494	15	6.38E-04	-3.72	RefSeq	TNK2	-1397
chr8:82067788-82068277	490	14	6.38E-04	-3.72	RefSeq	PAG1	118582
chr4:5071806-5072303	498	14	6.38E-04	-3.72	RefSeq	CYTL1	0
chr15:39311282-39311682	401	12	6.38E-04	-3.73	RefSeq	EXD1	-1034
chr12:42436890-42437229	340	10	6.30E-04	-3.73	RefSeq	PUS7L	1615
chr8:12031707-12032401	695	17	6.30E-04	-3.73	RefSeq	USP17L2	1278
chr1:108311766-108312143	378	11	6.30E-04	-3.73	ncRNA	VAV3-AS1	3178
chr16:16345383-16345902	520	15	6.30E-04	-3.73	ncRNA	PKD1P1	26416
chrX:48214791-48215238	448	13	6.30E-04	-3.73	RefSeq	SLC38A5	-1202
chr6:138581884-138582467	584	17	6.30E-04	-3.73	RefSeq	KIAA1244	57138
chr6:44419869-44420401	533	15	6.30E-04	-3.73	RefSeq	SPATS1	1494
chr17:23972256-23972806	551	16	6.30E-04	-3.73	RefSeq	KIAA0100	23499
chr1:91562185-91562679	495	14	6.30E-04	-3.73	RefSeq	HFM1	80336
chr5:149454212-149454735	524	15	6.30E-04	-3.73	RefSeq	CSF1R	18394
chr19:54844054-54844548	495	15	6.30E-04	-3.73	RefSeq	SCAF1	6860
chr7:107088580-107089169	590	17	6.30E-04	-3.73	RefSeq	SLC26A4	264
chr17:8086855-8087222	368	11	6.30E-04	-3.73	RefSeq	CTC1	4917
chr3:70092452-70092916	465	13	6.30E-04	-3.73	RefSeq	MITF	24011
chr20:36636420-36636913	494	14	6.30E-04	-3.73	RefSeq	RALGAPB	101557
chr8:18768751-18769249	499	12	6.30E-04	-3.74	RefSeq	PSD3	146228
chr18:72328963-72329432	470	13	6.30E-04	-3.74	RefSeq	ZNF516	6703
chr17:70768144-70768657	514	15	6.22E-04	-3.74	RefSeq	GGA3	1413
chr16:18782642-18782991	350	10	6.22E-04	-3.74	RefSeq	SMG1	62237
chrX:46826225-46826630	406	11	6.22E-04	-3.74	RefSeq	RGN	3527
chr3:123814336-123814824	489	14	6.14E-04	-3.74	RefSeq	PARP15	35197
chr3:187747348-187747708	361	10	6.14E-04	-3.74	RefSeq	TBCCD1	23319
chr1:35796754-35797154	401	12	6.14E-04	-3.74	RefSeq	NCDN	774
chr14:19459085-19459603	519	15	6.14E-04	-3.74	RefSeq	OR4K5	479
chr7:6625732-6626223	492	12	6.14E-04	-3.74	RefSeq	ZNF853	3680
chr3:42603479-42603928	450	13	6.14E-04	-3.75	RefSeq	SEC22C	13649
chr19:11779058-11779542	485	11	6.14E-04	-3.75	RefSeq	ZNF491	8667
chr12:109387156-109387688	533	15	6.14E-04	-3.75	RefSeq	GPN3	3222
chr10:101476658-101477150	493	14	6.06E-04	-3.75	RefSeq	COX15	5264
chr14:55142149-55142863	715	20	5.98E-04	-3.75	RefSeq	KTN1	25471
chr17:45567649-45568189	541	15	5.98E-04	-3.75	RefSeq	PPP1R9B	14689
chr7:44472829-44473360	532	16	5.98E-04	-3.75	RefSeq	NUDCD3	23551
chr15:19034275-19035014	740	20	5.98E-04	-3.75	ncRNA	GOLGA8CP	6587
chr16:55218406-55218834	429	12	5.98E-04	-3.75	RefSeq	MT1E	1320

chr2:6041398-6041892	495	14	5.98E-04	-3.75	ncRNA	LOC400940	1837
chr21:45699363-45699945	583	17	5.98E-04	-3.75	RefSeq	COL18A1	0
chr16:87323223-87323707	485	15	5.98E-04	-3.75	RefSeq	PIEZO1	55167
chrX:119947755-119948237	483	14	5.98E-04	-3.75	RefSeq	CT47A10	-435
chr1:119757203-119757582	380	11	5.98E-04	-3.75	RefSeq	HSD3B2	-1495
chr10:47212222-47212709	488	13	5.98E-04	-3.75	ncRNA	FAM25BP	1912
chr15:86964229-86964618	390	11	5.90E-04	-3.75	RefSeq	AEN	-913
chr19:22962989-22963386	398	11	5.90E-04	-3.75	RefSeq	ZNF728	14465
chr5:68887192-68887802	611	13	5.90E-04	-3.75	RefSeq	OCLN	62846
chr3:152590378-152590942	565	16	5.90E-04	-3.75	RefSeq	MED12L	303103
chr12:103214575-103214906	332	10	5.90E-04	-3.75	RefSeq	TXNRD1	80888
chr9:33666114-33666788	675	19	5.74E-04	-3.76	ncRNA	PTENP1	631
chr9:66263607-66264104	498	14	5.74E-04	-3.76	ncRNA	LOC403323	29628
chr7:129629076-129629732	657	19	5.74E-04	-3.76	RefSeq	TMEM209	2843
chr12:50486768-50487347	580	17	5.74E-04	-3.76	RefSeq	SCN8A	215481
chr10:115629269-115629944	676	18	5.65E-04	-3.77	RefSeq	NHLRC2	24888
chr19:56652263-56652757	495	13	5.65E-04	-3.77	RefSeq	SIGLEC8	764
chr5:217784-218405	622	17	5.65E-04	-3.77	RefSeq	PLEKHG4B	24411
chr14:30557163-30557762	600	17	5.65E-04	-3.77	RefSeq	STRN3	7597
chr19:57242852-57243370	519	13	5.65E-04	-3.77	RefSeq	ZNF432	516
chr14:76919376-76919757	382	11	5.65E-04	-3.77	RefSeq	SAMD15	5861
chr8:11180509-11180832	324	10	5.65E-04	-3.77	RefSeq	MTMR9	1099
chr7:73858892-73859370	479	14	5.57E-04	-3.77	RefSeq	GTF2IRD2	46439
chrX:114157975-114158494	520	15	5.57E-04	-3.77	RefSeq	IL13RA2	0
chr19:21092000-21092523	524	15	5.57E-04	-3.77	RefSeq	ZNF714	35207
chr16:1302945-1303288	344	10	5.57E-04	-3.77	RefSeq	UBE2I	3316
chr3:53103360-53103940	581	15	5.57E-04	-3.77	RefSeq	RFT1	35571
chr8:119190751-119191292	542	14	5.57E-04	-3.77	RefSeq	EXT1	1948
chr13:45324473-45325023	551	15	5.57E-04	-3.78	RefSeq	SIAH3	-625
chr1:245988345-245988882	538	15	5.57E-04	-3.78	RefSeq	OR1C1	-13
chrX:119938115-119938517	403	12	5.57E-04	-3.78	RefSeq	CT47A10	-515
chr7:2254010-2254521	512	10	5.57E-04	-3.78	RefSeq	NUDT1	5627
chr16:33114091-33114658	568	30	5.57E-04	-3.78	RefSeq	TP53TG3B	1007
chr10:112686191-112686692	502	14	5.57E-04	-3.78	RefSeq	SHOC2	16900
chrX:122847877-122848352	476	14	5.57E-04	-3.78	RefSeq	XIAP	26179
chr8:124817785-124818243	459	13	5.57E-04	-3.78	RefSeq	ANXA13	586
chr15:27811029-27811534	506	13	5.49E-04	-3.78	RefSeq	TJP1	236761
chr6:30648546-30649064	519	15	5.49E-04	-3.78	RefSeq	ABCF1	1397
chr11:61345031-61345530	500	10	5.49E-04	-3.78	RefSeq	FADS2	4780



chr1:229547002-229547403	402	11	5.49E-04	-3.78	RefSeq	SPRTN	6697
chr3:120879261-120879681	421	12	5.49E-04	-3.78	RefSeq	COX17	-327
chr1:143696120-143696685	566	16	5.49E-04	-3.78	RefSeq	PDE4DIP	9706
chr10:75196109-75196768	660	19	5.49E-04	-3.78	RefSeq	SEC24C	21972
chr16:18798241-18798812	572	16	5.41E-04	-3.79	RefSeq	SMG1	46416
chr4:145785391-145786012	622	17	5.41E-04	-3.79	RefSeq	HHIP	-586
chr7:36998253-36998749	497	14	5.41E-04	-3.79	RefSeq	ELMO1	456706
chr1:161028937-161029421	485	14	5.41E-04	-3.79	RefSeq	HSD17B7	1817
chr1:26023325-26023875	551	15	5.41E-04	-3.79	RefSeq	MTFR1L	4341
chr7:99411965-99412379	415	11	5.41E-04	-3.79	RefSeq	AZGP1	-293
chr10:75132208-75132751	544	16	5.41E-04	-3.79	ncRNA	BMS1P4	27528
chr19:63175394-63175947	554	16	5.41E-04	-3.79	RefSeq	C19orf18	1768
chr14:73491737-73492422	686	19	5.41E-04	-3.79	RefSeq	COQ6	5029
chr7:63950662-63951151	490	14	5.41E-04	-3.79	ncRNA	ZNF138	58461
chr1:109061607-109062112	506	14	5.41E-04	-3.79	RefSeq	FNDC7	4528
chr3:194755007-194755550	544	14	5.41E-04	-3.79	RefSeq	ATP13A4	0
chr4:15686522-15687009	488	14	5.41E-04	-3.79	RefSeq	PROM1	7684
chr20:20480136-20480757	622	17	5.41E-04	-3.79	RefSeq	RALGAPA2	160510
chr10:15249733-15250315	583	15	5.41E-04	-3.79	RefSeq	NMT2	387
chr7:65342615-65343101	487	14	5.41E-04	-3.79	RefSeq	TPST1	34921
chr10:75075231-75075570	340	10	5.41E-04	-3.79	RefSeq	SYNPO2L	10300
chr7:72136793-72137326	534	15	5.41E-04	-3.8	ncRNA	SPDYE8P	920
chr7:65844692-65845030	339	10	5.41E-04	-3.8	RefSeq	RABGEF1	60179
chr12:131256411-131256846	436	13	5.33E-04	-3.8	RefSeq	GALNT9	159133
chr4:53190866-53191381	516	15	5.33E-04	-3.8	RefSeq	USP46	26136
chr19:18198707-18199223	517	13	5.33E-04	-3.8	RefSeq	PDE4C	20788
chr18:62423576-62424066	491	14	5.33E-04	-3.8	RefSeq	CDH19	-1220
chr4:166173140-166173480	341	10	5.33E-04	-3.8	RefSeq	TRIM60	539
chr8:41548392-41548891	500	14	5.33E-04	-3.8	ncRNA	LOC102723729	6154
chr9:94096772-94097267	496	14	5.33E-04	-3.8	RefSeq	IARS	-912
chr19:11512308-11512895	588	16	5.33E-04	-3.8	RefSeq	CNN1	1729
chr7:157190911-157191437	527	16	5.33E-04	-3.8	RefSeq	PTPRN2	881807
chr9:4479312-4479821	510	15	5.33E-04	-3.8	RefSeq	SLC1A1	-606
chr3:195666179-195666670	492	14	5.33E-04	-3.8	RefSeq	ATP13A3	3588
chr1:234751096-234751453	358	10	5.33E-04	-3.81	RefSeq	LGALS8	2959
chr3:44661434-44661941	508	10	5.33E-04	-3.81	RefSeq	ZNF197	19919
chr3:123896362-123896858	497	14	5.33E-04	-3.81	RefSeq	PARP14	14000
chr17:74012767-74013353	587	16	5.33E-04	-3.81	RefSeq	DNAH17	71719
chr17:41946669-41947193	525	15	5.33E-04	-3.81	RefSeq	LRRC37A2	1277

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

chr2:159026083-159026621	539	15	5.33E-04	-3.81	RefSeq	PKP4	4361
chr14:73073152-73073641	490	10	5.33E-04	-3.81	RefSeq	ACOT1	-40
chr3:49441181-49441701	521	15	5.33E-04	-3.81	RefSeq	NICN1	61
chr10:126656394-126656925	532	16	5.33E-04	-3.81	RefSeq	ZRANB1	35712
chr6:41997555-41998041	487	14	5.25E-04	-3.81	RefSeq	BYSL	612
chr3:151963259-151963821	563	16	5.25E-04	-3.81	RefSeq	SIAH2	133
chr7:101987924-101988424	501	15	5.25E-04	-3.81	RefSeq	SPDYE2	9146
chr17:36191496-36192008	513	14	5.25E-04	-3.81	RefSeq	KRT27	305
chr11:100301773-100302320	548	11	5.25E-04	-3.82	RefSeq	ARHGAP42	238156
chr18:46605822-46606334	513	10	5.25E-04	-3.82	RefSeq	MRO	-69
chr5:258546-259045	500	14	5.25E-04	-3.82	RefSeq	CCDC127	12253
chrX:17030454-17030956	503	15	5.25E-04	-3.82	RefSeq	REPS2	155719
chr16:8631851-8632265	415	12	5.25E-04	-3.82	RefSeq	METTL22	8823
chr10:103739492-103739907	416	12	5.17E-04	-3.82	RefSeq	C10orf76	66016
chr10:43606536-43607042	507	14	5.17E-04	-3.82	ncRNA	HNRNPA3P1	-664
chr1:143649573-143650082	510	15	5.17E-04	-3.82	RefSeq	PDE4DIP	56309
chrX:99785709-99786215	507	12	5.09E-04	-3.82	RefSeq	SRPX2	0
chr6:26493279-26493726	448	13	5.09E-04	-3.82	RefSeq	BTN2A2	1861
chr14:22467061-22467631	571	17	4.93E-04	-3.83	RefSeq	PRMT5	1004
chr11:123686243-123686750	508	14	4.93E-04	-3.83	RefSeq	OR8D1	-370
chr22:22463607-22464228	622	18	4.93E-04	-3.83	RefSeq	SMARCB1	4457
chrX:119904878-119905376	499	14	4.93E-04	-3.83	RefSeq	CT47A10	-1323
chr10:848842-849377	536	15	4.85E-04	-3.83	RefSeq	LARP4B	118269
chr21:44869126-44869631	506	14	4.85E-04	-3.83	RefSeq	TSPEAR	86293
chr18:26940710-26941219	510	15	4.85E-04	-3.84	ncRNA	DSCAS	5161
chr9:129725029-129725520	492	14	4.85E-04	-3.84	RefSeq	PIP5KL1	7378
chr6:158163717-158164236	520	11	4.77E-04	-3.84	RefSeq	SNX9	0
chr13:112483660-112484160	501	12	4.69E-04	-3.84	RefSeq	ATP11A	91016
chr19:58355196-58355745	550	15	4.69E-04	-3.84	RefSeq	ZNF347	-1070
chr22:44952047-44952633	587	17	4.69E-04	-3.84	RefSeq	PPARA	26884
chrX:153317147-153317651	505	14	4.69E-04	-3.84	RefSeq	ATP6AP1	6975
chr2:159564415-159565133	719	17	4.69E-04	-3.84	RefSeq	TANC1	31023
chr9:138417843-138418342	500	14	4.69E-04	-3.84	RefSeq	SDCCAG3	6534
chr19:17817926-17818369	444	14	4.69E-04	-3.84	RefSeq	JAK3	1473
chr16:70320262-70320760	499	14	4.69E-04	-3.84	RefSeq	AP1G1	79718
chr8:22282300-22282816	517	15	4.69E-04	-3.85	RefSeq	SLC39A14	1593
chr15:76005489-76005983	495	14	4.69E-04	-3.85	ncRNA	LOC645752	261
chr14:104526024-104526508	485	14	4.69E-04	-3.85	RefSeq	C14orf79	2363
chr19:1124155-1124683	529	14	4.69E-04	-3.85	RefSeq	SBNO2	600

chrX:71850026-71850595	570	15	4.69E-04	-3.85	RefSeq	PHKA1	160
chr14:20529829-20530363	535	15	4.69E-04	-3.85	RefSeq	METTL17	2024
chr11:49011405-49011909	505	12	4.69E-04	-3.85	RefSeq	TRIM49B	1677
chr4:141034369-141034816	448	13	4.69E-04	-3.86	RefSeq	MAML3	259868
chr1:58927304-58927846	543	15	4.69E-04	-3.86	RefSeq	MYSM1	10490
chr4:148873170-148873670	501	14	4.69E-04	-3.86	RefSeq	ARHGAP10	267
chrX:152258342-152258877	536	15	4.69E-04	-3.86	RefSeq	ZNF275	5535
chr4:166422348-166422888	541	16	4.69E-04	-3.86	RefSeq	KLHL2	71727
chr2:106447860-106448379	520	15	4.60E-04	-3.86	RefSeq	RGPD3	2855
chr10:69900134-69900676	543	11	4.60E-04	-3.86	RefSeq	DNA2	1061
chr19:3877328-3877873	546	16	4.60E-04	-3.87	RefSeq	ATCAY	45710
chr3:140150665-140151290	626	17	4.60E-04	-3.87	RefSeq	FOXL2NB	1899
chr2:242578045-242578533	489	14	4.60E-04	-3.87	ncRNA	LINC01237	105858
chr2:12081146-12081661	516	11	4.60E-04	-3.87	ncRNA	LOC100506457	16453
chr1:111487179-111487681	503	14	4.52E-04	-3.87	RefSeq	CEPT1	3407
chr4:144700495-144700914	420	11	4.52E-04	-3.87	ncRNA	GUSBP5	420
chr1:12814454-12814785	332	10	4.52E-04	-3.87	RefSeq	PRAMEF11	-602
chr6:151820882-151821396	515	14	4.36E-04	-3.88	RefSeq	C6orf211	5796
chr19:50701216-50701701	486	12	4.36E-04	-3.88	RefSeq	VASP	-827
chr2:48643785-48644302	518	15	4.28E-04	-3.88	RefSeq	STON1-GTF2A1L	33217
chr22:49412585-49413095	511	14	4.28E-04	-3.89	RefSeq	ARSA	373
chr12:54789706-54790112	407	12	4.28E-04	-3.89	RefSeq	PA2G4	5336
chr12:63083177-63083687	511	10	4.28E-04	-3.89	RefSeq	XPOT	-733
chr10:31699224-31699668	445	11	4.28E-04	-3.89	RefSeq	ZEB1	49154
chr16:30152338-30152711	374	11	4.28E-04	-3.89	ncRNA	LOC613037	11723
chr10:35419047-35419540	494	11	4.28E-04	-3.89	RefSeq	CUL2	37
chr2:87049662-87050218	557	15	4.28E-04	-3.89	RefSeq	RGPD1	51413
chr5:78444866-78445383	518	15	4.28E-04	-3.89	RefSeq	BHMT	1506
chr8:55095485-55095987	503	13	4.28E-04	-3.89	RefSeq	TCEA1	1583
chr6:107456361-107456858	498	11	4.28E-04	-3.89	RefSeq	C6orf203	292
chr22:20069548-20070057	510	14	4.20E-04	-3.89	RefSeq	RIMBP3C	1885
chr22:35828966-35829482	517	10	4.20E-04	-3.89	RefSeq	TMPRSS6	6068
chr8:86760575-86761063	489	13	4.20E-04	-3.9	ncRNA	REXO1L2P	932
chr9:5949755-5950263	509	15	4.20E-04	-3.9	RefSeq	KIAA2026	47741
chr1:1655809-1656299	491	14	4.04E-04	-3.9	RefSeq	SLC35E2	11000
chr17:78078018-78078369	352	11	4.04E-04	-3.9	RefSeq	FOXK2	7135
chr1:119485470-119485996	527	15	3.96E-04	-3.9	RefSeq	WARS2	-651
chrX:125127820-125128323	504	14	3.96E-04	-3.9	RefSeq	DCAF12L2	-58
chrX:153281845-153282431	587	13	3.96E-04	-3.91	RefSeq	RPL10	2080

chr12:94013937-94014482	546	15	3.96E-04	-3.91	RefSeq	FGD6	120890
chr2:27653305-27653811	507	14	3.88E-04	-3.91	RefSeq	C2orf16	412
chr20:60981542-60982048	507	14	3.88E-04	-3.91	RefSeq	DIDO1	46301
chr16:22363484-22363966	483	14	3.80E-04	-3.92	ncRNA	SMG1P1	7654
chr22:20231420-20231964	545	16	3.80E-04	-3.92	RefSeq	RIMBP3C	3787
chr14:20857755-20858282	528	15	3.80E-04	-3.92	RefSeq	RPGRIP1	31779
chr19:46558558-46559032	475	12	3.80E-04	-3.92	RefSeq	B9D2	2887
chr9:71478038-71478581	544	16	3.72E-04	-3.93	RefSeq	APBA1	-942
chrX:119942895-119943377	483	14	3.72E-04	-3.93	RefSeq	CT47A10	-435
chr20:3261581-3262177	597	17	3.64E-04	-3.93	RefSeq	C20orf194	74133
chr5:175325893-175326432	540	11	3.64E-04	-3.93	RefSeq	THOC3	1493
chr5:267508-267843	336	10	3.64E-04	-3.93	RefSeq	CCDC127	3455
chr1:16920592-16921142	551	16	3.47E-04	-3.94	ncRNA	ESPNP	-1352
chr2:190349878-190350419	542	15	3.47E-04	-3.94	RefSeq	ORMDL1	6924
chr2:127999309-127999794	486	12	3.47E-04	-3.94	RefSeq	IWS1	764
chrX:48048361-48048967	607	17	3.47E-04	-3.94	ncRNA	SSX9	1592
chr14:22599859-22600345	487	14	3.47E-04	-3.95	RefSeq	ACIN1	34319
chr10:102809274-102809814	541	16	3.47E-04	-3.95	RefSeq	KAZALD1	-1175
chr9:5502065-5502562	498	14	3.47E-04	-3.95	RefSeq	PDCD1LG2	1520
chr19:51013926-51014459	534	15	3.47E-04	-3.95	RefSeq	SYMPK	43930
chr11:114878028-114878532	505	13	3.47E-04	-3.95	RefSeq	CADM1	1920
chr21:42657302-42657812	511	14	3.47E-04	-3.96	RefSeq	TFF1	1902
chr8:12481016-12481377	362	10	3.47E-04	-3.96	ncRNA	LOC729732	86115
chr6:36479634-36479986	353	11	3.47E-04	-3.96	RefSeq	PXT1	38659
chr13:112482988-112483331	344	10	3.47E-04	-3.96	RefSeq	ATP11A	90344
chr19:58640560-58641078	519	14	3.47E-04	-3.96	RefSeq	ZNF761	13521
chr19:5785838-5786399	562	13	3.47E-04	-3.97	RefSeq	FUT6	4344
chrX:119623654-119624149	496	13	3.47E-04	-3.97	RefSeq	MCTS1	1074
chr19:10640960-10641450	491	14	3.39E-04	-3.97	RefSeq	ILF3	15023
chr2:113971301-113971666	366	10	3.39E-04	-3.98	RefSeq	FOXD4L1	-1465
chrX:47851872-47852368	497	14	3.15E-04	-3.99	ncRNA	SSX6	0
chr17:7550174-7550620	447	13	3.15E-04	-3.99	RefSeq	EFNB3	929
chr1:14307787-143078299	513	15	3.15E-04	-4	RefSeq	NBPF20	219619
chr12:118590689-118591113	425	13	3.07E-04	-4	RefSeq	PRKAB1	545
chr6:133132509-133133154	646	18	3.07E-04	-4	RefSeq	SLC18B1	28287
chr5:132227242-132227744	503	14	3.07E-04	-4	RefSeq	GDF9	2732
chr4:185809456-185809788	333	10	3.07E-04	-4	RefSeq	PRIMPOL	1695
chr2:15989653-15990138	486	14	3.07E-04	-4	ncRNA	MYCNUT	11681
chr1:39096237-39096661	425	13	3.07E-04	-4	RefSeq	RRAGC	1422



chr16:28674107-28674984	878	23	3.07E-04	-4	RefSeq	NPIP9	2850
chr17:562541-563046	506	13	3.07E-04	-4	RefSeq	VPS53	1801
chrX:119923454-119923936	483	14	3.07E-04	-4.01	RefSeq	CT47A10	23384
chr3:42613162-42613754	593	13	3.07E-04	-4.01	RefSeq	SEC22C	3823
chr2:218797373-218798098	726	21	3.07E-04	-4.01	RefSeq	ARPC2	7008
chr11:82675144-82675641	498	14	3.07E-04	-4.01	RefSeq	CCDC90B	-45
chr7:56087502-56087950	449	13	2.99E-04	-4.01	RefSeq	CCT6A	630
chr9:35391880-35392247	368	11	2.91E-04	-4.01	RefSeq	UNC13B	239891
chr2:219283873-219284357	485	14	2.91E-04	-4.01	RefSeq	TTLL4	61
chr19:6687656-6688296	641	17	2.91E-04	-4.01	RefSeq	GPR108	338
chr15:30475670-30476592	923	25	2.91E-04	-4.01	RefSeq	GOLGA8K	6194
chr5:151040758-151041334	577	14	2.91E-04	-4.01	RefSeq	SPARC	5475
chr5:21527068-21527514	447	13	2.91E-04	-4.01	ncRNA	GUSBP1	31722
chr11:92704083-92704593	511	15	2.91E-04	-4.02	RefSeq	CCDC67	552
chr11:89656324-89656823	500	14	2.91E-04	-4.02	ncRNA	DISC1FP1	32276
chr4:39541381-39541847	467	14	2.83E-04	-4.02	RefSeq	PDS5A	114125
chr5:149647772-149648536	765	22	2.83E-04	-4.02	RefSeq	CAMK2A	1061
chr1:15925174-15925684	511	15	2.83E-04	-4.02	RefSeq	PLEKHM2	41760
chr4:52581791-52582284	494	15	2.83E-04	-4.02	RefSeq	SGCB	16959
chr7:115928071-115928733	663	19	2.83E-04	-4.02	RefSeq	CAV2	1180
chr2:219789485-219790027	543	15	2.83E-04	-4.02	RefSeq	ABCB6	1930
chr5:176000081-176000551	471	13	2.83E-04	-4.02	RefSeq	EIF4E1B	9792
chr4:37504866-37505409	544	15	2.83E-04	-4.02	RefSeq	PGM2	189
chr10:126703984-126704484	501	14	2.83E-04	-4.02	RefSeq	CTBP2	135131
chr1:77367347-77367952	606	18	2.83E-04	-4.02	RefSeq	PIGK	89769
chr15:72828385-72828969	585	14	2.75E-04	-4.02	RefSeq	CYP1A2	148
chr2:131130864-131131645	782	22	2.67E-04	-4.03	RefSeq	POTEJ	45288
chr2:46778352-46779141	790	18	2.67E-04	-4.03	RefSeq	SOCS5	-462
chrX:49217532-49218170	639	18	2.67E-04	-4.03	RefSeq	GAGE12F	5177
chr13:33291323-33291860	538	16	2.67E-04	-4.03	RefSeq	RFC3	1117
chrX:48929588-48930332	745	21	2.67E-04	-4.03	RefSeq	PRICKLE3	0
chr12:44516556-44517078	523	15	2.67E-04	-4.03	RefSeq	ARID2	106669
chr8:8136695-8137196	502	14	2.67E-04	-4.03	ncRNA	FAM86B3P	13193
chr1:110361524-110362053	530	15	2.67E-04	-4.03	RefSeq	AHCYL1	32614
chr3:15771660-15772303	644	19	2.67E-04	-4.03	RefSeq	ANKRD28	42393
chr10:126708266-126708816	551	15	2.67E-04	-4.03	RefSeq	CTBP2	130799
chr21:44845152-44845823	672	19	2.67E-04	-4.03	RefSeq	TSPEAR	110101
chr3:197189985-197190409	425	13	2.67E-04	-4.03	ncRNA	SDHAP1	11139
chr1:149310878-149311344	467	13	2.67E-04	-4.03	RefSeq	GABPB2	1174

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.





chr15:70760398-70760957	560	16	2.67E-04	-4.03	ncRNA	HIGD2B	4587
chr10:79414401-79415038	638	19	2.67E-04	-4.04	RefSeq	POLR3A	44267
chr7:38874663-38875274	612	17	2.67E-04	-4.04	RefSeq	VPS41	40052
chr5:16752358-16753013	656	14	2.67E-04	-4.04	RefSeq	MYO10	236373
chr11:60864901-60865574	674	16	2.67E-04	-4.04	RefSeq	DAK	7671
chrX:119894282-119894748	467	13	2.67E-04	-4.04	RefSeq	CT47B1	-474
chr17:46176617-46177162	546	16	2.67E-04	-4.04	RefSeq	LUC7L3	24692
chr19:15440561-15441096	536	16	2.67E-04	-4.04	RefSeq	PGLYRP2	10220
chr7:101983228-101983877	650	18	2.67E-04	-4.04	RefSeq	SPDYE2	4450
chr19:63135878-63136454	577	16	2.67E-04	-4.04	RefSeq	ZNF418	2099
chr16:74127225-74127593	369	11	2.67E-04	-4.04	RefSeq	CHST5	-655
chr14:92283607-92284097	491	14	2.59E-04	-4.04	RefSeq	LGMN	704
chr6:112151122-112151681	560	16	2.59E-04	-4.04	RefSeq	FYN	149668
chr17:35371886-35372608	723	20	2.59E-04	-4.04	RefSeq	GSDMA	-144
chr2:24401800-24402343	544	14	2.59E-04	-4.04	RefSeq	ITSN2	34559
chr5:139040587-139041142	556	16	2.59E-04	-4.05	RefSeq	CXXC5	32102
chr14:30097316-30097884	569	16	2.59E-04	-4.05	RefSeq	G2E3	-196
chr12:110603862-110604399	538	15	2.50E-04	-4.05	RefSeq	BRAP	3785
chr10:119125806-119126217	412	12	2.50E-04	-4.05	RefSeq	PDZD8	-878
chr20:30122476-30123118	643	17	2.50E-04	-4.05	RefSeq	HCK	18824
chr2:55128022-55128524	503	15	2.50E-04	-4.05	RefSeq	RTN4	2715
chr14:20318025-20318531	507	15	2.50E-04	-4.05	RefSeq	RNASE6	-519
chr3:130368832-130369452	621	17	2.50E-04	-4.05	RefSeq	CNBP	16049
chr7:98987094-98987762	669	18	2.50E-04	-4.05	RefSeq	FAM200A	0
chrX:40477641-40478194	554	16	2.42E-04	-4.05	RefSeq	MED14OS	-1398
chr4:184839164-184839630	467	12	2.34E-04	-4.06	RefSeq	TRAPPC11	21750
chr1:212792314-212792811	498	11	2.34E-04	-4.06	RefSeq	PTPN14	-666
chr3:75346447-75347021	575	16	2.34E-04	-4.06	ncRNA	MIR4444-1	130
chrX:106903235-106903782	548	16	2.34E-04	-4.06	RefSeq	TSC22D3	1892
chr19:41211183-41211727	545	17	2.34E-04	-4.06	RefSeq	CLIP3	3687
chr7:72132235-72133090	856	23	2.34E-04	-4.06	ncRNA	SPDYE8P	5156
chr3:158014709-158015145	437	12	2.34E-04	-4.06	ncRNA	LINC00886	2401
chr15:53450609-53451062	454	13	2.34E-04	-4.07	RefSeq	CCPG1	36939
chr16:30107829-30108302	474	13	2.34E-04	-4.07	RefSeq	CORO1A	5597
chr12:9487526-9488036	511	14	2.34E-04	-4.07	ncRNA	DDX12P	4000
chr1:144027352-144028036	685	18	2.34E-04	-4.07	RefSeq	NBPF12	722400
chr11:47693469-47693912	444	13	2.34E-04	-4.07	RefSeq	AGBL2	0
chr17:11837144-11837539	396	11	2.34E-04	-4.07	RefSeq	ZNF18	3876
chr19:61135139-61135652	514	15	2.34E-04	-4.07	RefSeq	NLRP13	0

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

chr14:20923962-20924539	578	15	2.34E-04	-4.07	RefSeq	CHD8	45169
chr17:35479243-35479762	520	15	2.34E-04	-4.07	RefSeq	THRA	6649
chr6:74288363-74288942	580	17	2.34E-04	-4.07	RefSeq	EEF1A1	-886
chr6:45458315-45458834	520	15	2.34E-04	-4.07	RefSeq	RUNX2	54283
chr16:30199006-30199484	479	14	2.34E-04	-4.07	ncRNA	SMG1P5	54713
chr8:22477686-22478261	576	14	2.26E-04	-4.08	RefSeq	SORBS3	-863
chr10:75125201-75125744	544	15	2.26E-04	-4.08	RefSeq	AGAP5	1817
chr5:218895-219644	750	21	2.26E-04	-4.08	RefSeq	PLEKHG4B	25522
chr11:33055459-33056028	570	16	2.26E-04	-4.08	ncRNA	LINC00294	1187
chr8:12378521-12378973	453	13	2.26E-04	-4.08	ncRNA	LOC100506990	39628
chr11:46682152-46682775	624	18	2.26E-04	-4.08	RefSeq	ZNF408	2932
chr10:48907342-48907854	513	14	2.26E-04	-4.08	ncRNA	CTGLF12P	1811
chr10:116570566-116571087	522	14	2.26E-04	-4.08	RefSeq	FAM160B1	-406
chr9:101020138-101020665	528	15	2.26E-04	-4.08	RefSeq	ALG2	3403
chr3:99088305-99088909	605	17	2.26E-04	-4.08	RefSeq	CRYBG3	64731
chr4:8977884-8978870	987	25	2.26E-04	-4.08	ncRNA	USP17L6P	0
chr5:154179454-154180062	609	18	2.26E-04	-4.08	RefSeq	FAXDC2	30345
chr7:134322894-134323872	979	27	2.26E-04	-4.09	RefSeq	AGBL3	1095
chr2:10016041-10016597	557	16	2.26E-04	-4.09	RefSeq	GRHL1	6798
chr1:111488432-111489141	710	20	2.26E-04	-4.09	RefSeq	CEPT1	4660
chr11:65521388-65521969	582	17	2.26E-04	-4.09	RefSeq	EIF1AD	4245
chr16:2153924-2154606	683	16	2.26E-04	-4.09	RefSeq	TRAF7	8124
chr1:203437938-203438565	628	17	2.26E-04	-4.09	RefSeq	DSTYK	8786
chr9:94100984-94101557	574	17	2.26E-04	-4.09	RefSeq	NOL8	26141
chr9:93163967-93164707	741	18	2.26E-04	-4.09	RefSeq	AUH	0
chr9:74755727-74756350	624	18	2.26E-04	-4.09	RefSeq	ALDH1A1	1704
chr12:10926406-10926996	591	17	2.26E-04	-4.09	RefSeq	PRH1	288494
chr8:7872786-7874109	1324	36	2.26E-04	-4.09	RefSeq	USP17L3	0
chr6:26964670-26965032	363	11	2.26E-04	-4.09	ncRNA	GUSBP2	67281
chr6:116705830-116706397	568	16	2.26E-04	-4.09	RefSeq	TSPYL1	1577
chr7:158313894-158314777	884	25	2.26E-04	-4.09	RefSeq	ESYT2	304
chr8:1775177-1776267	1091	32	2.26E-04	-4.09	RefSeq	ARHGEF10	15621
chr15:33480101-33480728	628	17	2.26E-04	-4.09	RefSeq	DPH6	144969
chr7:1490944-1491518	575	17	2.26E-04	-4.1	RefSeq	INTS1	19027
chr11:4585566-4586084	519	14	2.26E-04	-4.1	RefSeq	TRIM68	0
chr4:88941279-88941793	515	13	2.26E-04	-4.1	RefSeq	IBSP	1553
chrX:22202473-22202988	516	15	2.26E-04	-4.1	RefSeq	ZNF645	1522
chr10:100169716-100170169	454	13	2.26E-04	-4.1	RefSeq	HPS1	26526
chr7:20008847-20009296	450	10	2.26E-04	-4.1	ncRNA	LOC101927668	137279



chr9:166768-167286	519	15	2.26E-04	-4.1	RefSeq	CBWD1	1790
chr1:109529566-109530096	531	16	2.26E-04	-4.1	RefSeq	KIAA1324	71458
chr5:147998006-147998513	508	15	2.26E-04	-4.1	RefSeq	HTR4	15771
chr19:12110288-12110877	590	13	2.26E-04	-4.1	RefSeq	ZNF20	1346
chr3:173044245-173044891	647	17	2.26E-04	-4.11	RefSeq	TMEM212	412
chr16:2154936-2155509	574	16	2.26E-04	-4.11	RefSeq	TRAF7	9136
chr10:75071542-75071913	372	11	2.26E-04	-4.11	RefSeq	MYOZ1	-20
chr20:34631553-34632100	548	15	2.26E-04	-4.11	ncRNA	DLGAP4-AS1	2993
chr22:49056726-49057293	568	16	2.26E-04	-4.11	RefSeq	PLXNB2	18044
chr2:71073806-71074319	514	15	2.26E-04	-4.11	RefSeq	TEX261	1191
chr21:43900505-43901161	657	18	2.26E-04	-4.11	RefSeq	HSF2BP	2642
chr4:148825396-148825783	388	11	2.26E-04	-4.11	RefSeq	PRMT9	-665
chr2:213594372-213594907	536	15	2.26E-04	-4.11	RefSeq	IKZF2	129672
chr6:26548825-26549211	387	10	2.26E-04	-4.11	RefSeq	BTN3A3	146
chrX:99963750-99964202	453	13	2.26E-04	-4.12	RefSeq	CSTF2	1746
chr1:32610958-32611629	672	19	2.26E-04	-4.12	RefSeq	BSDC1	21021
chr13:25336126-25336802	677	19	2.26E-04	-4.12	RefSeq	ATP8A2	491917
chr5:115935957-115936612	656	19	2.18E-04	-4.12	RefSeq	SEMA6A	1910
chr12:131911136-131911787	652	19	2.18E-04	-4.12	RefSeq	GOLGA3	3713
chr1:202001527-202001917	391	11	2.18E-04	-4.12	RefSeq	LAX1	620
chr3:126232618-126233172	555	16	2.10E-04	-4.12	RefSeq	HEG1	24321
chr8:12000677-12001193	517	15	2.10E-04	-4.12	RefSeq	ZNF705D	16421
chr10:51262182-51262668	487	14	2.10E-04	-4.12	RefSeq	TIMM23B	220797
chr15:99610732-99611269	538	15	2.10E-04	-4.12	RefSeq	CHSY1	-1071
chr11:71313725-71314276	552	16	2.10E-04	-4.13	ncRNA	LOC100133315	2866
chr14:22356907-22357573	667	18	2.10E-04	-4.13	RefSeq	SLC7A7	1288
chr3:44934440-44935081	642	19	2.10E-04	-4.13	RefSeq	ZDHHC3	57598
chr17:59919254-59919697	444	13	2.10E-04	-4.13	RefSeq	POLG2	3950
chr16:28387146-28387698	553	14	2.10E-04	-4.13	RefSeq	CLN3	23207
chr6:27476520-27477218	699	20	2.10E-04	-4.13	RefSeq	ZNF391	12017
chr6:10635675-10636258	584	14	2.10E-04	-4.13	RefSeq	GCNT2	6121
chr20:43849627-43850052	426	13	2.10E-04	-4.13	RefSeq	WFDC3	3903
chr3:48442776-48443577	802	23	2.10E-04	-4.13	RefSeq	PLXNB1	2888
chr7:126672717-126673269	553	14	2.10E-04	-4.13	RefSeq	GRM8	6396
chr19:5238547-5239218	672	18	2.10E-04	-4.13	RefSeq	PTPRS	52597
chr14:93596143-93596769	627	18	2.10E-04	-4.13	RefSeq	DDX24	20543
chr2:190292200-190292963	764	20	2.10E-04	-4.13	RefSeq	ANKAR	43244
chr2:241461149-241461828	680	20	2.10E-04	-4.13	RefSeq	AGXT	4314
chr9:68942605-68943141	537	16	2.10E-04	-4.13	ncRNA	LOC100133920	1424

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.



chr22:21316395-21317256	862	24	2.10E-04	-4.14	RefSeq	GGTLC2	0
chr16:4491916-4492463	548	11	2.10E-04	-4.14	RefSeq	HMOX2	25574
chr22:16771402-16771991	590	17	2.10E-04	-4.14	RefSeq	MICAL3	115335
chr16:945846-946371	526	16	2.10E-04	-4.14	RefSeq	LMF1	14615
chr2:201636049-201636641	593	17	2.10E-04	-4.14	RefSeq	FAM126B	7997
chr2:87873383-87874020	638	18	2.10E-04	-4.14	RefSeq	RGPD1	192405
chr11:57067449-57068126	678	19	2.10E-04	-4.14	RefSeq	SMTNL1	759
chr3:3862430-3863069	640	18	2.10E-04	-4.14	RefSeq	LRRN1	46309
chr3:171167671-171168273	603	17	2.10E-04	-4.14	RefSeq	SEC62	397
chr9:85803031-85803565	535	15	2.02E-04	-4.14	RefSeq	RMI1	17574
chr12:912038-912588	551	16	2.02E-04	-4.14	RefSeq	RAD52	56881
chr19:12116833-12117427	595	16	2.02E-04	-4.14	RefSeq	ZNF625	11120
chr17:53968214-53968791	578	14	2.02E-04	-4.14	RefSeq	42251	4388
chr12:117310683-117311037	355	11	2.02E-04	-4.14	RefSeq	SUDS3	11942
chr22:29198028-29198737	710	20	2.02E-04	-4.15	RefSeq	SEC14L3	0
chr12:111428146-111428771	626	17	2.02E-04	-4.15	RefSeq	PTPN11	87227
chr17:16642144-16642643	500	15	2.02E-04	-4.15	ncRNA	USP32P1	11213
chrX:77041692-77042221	530	15	2.02E-04	-4.15	RefSeq	COX7B	75
chr8:12343957-12344501	545	15	2.02E-04	-4.15	ncRNA	LOC100506990	5064
chr7:72117570-72118093	524	15	2.02E-04	-4.15	ncRNA	PMS2L2	2990
chr7:30973083-30973687	605	15	2.02E-04	-4.15	RefSeq	GHRHR	2922
chr19:38156628-38157232	605	17	2.02E-04	-4.15	RefSeq	C19orf40	1665
chr16:45274720-45275125	406	12	2.02E-04	-4.15	RefSeq	VPS35	5521
chrX:49219068-49219694	627	18	2.02E-04	-4.15	RefSeq	GAGE12F	6713
chrX:49236783-49237271	489	14	2.02E-04	-4.16	RefSeq	GAGE12C	5287
chr7:74963856-74964367	512	14	2.02E-04	-4.16	RefSeq	SPDYE5	1621
chr7:101985680-101986232	553	15	2.02E-04	-4.16	RefSeq	SPDYE2	6902
chr9:35812697-35813221	525	15	2.02E-04	-4.17	RefSeq	FAM221B	5524
chr7:44473625-44474442	818	20	2.02E-04	-4.17	RefSeq	NUDCD3	22469
chr7:38635936-38636513	578	17	2.02E-04	-4.17	RefSeq	AMPH	1180
chr8:124851702-124852237	536	16	2.02E-04	-4.17	RefSeq	FAM91A1	1639
chr17:20134687-20135211	525	15	2.02E-04	-4.17	RefSeq	SPECC1	203760
chr1:148867678-148868327	650	17	2.02E-04	-4.17	RefSeq	ENSA	396
chr17:78300024-78300517	494	14	2.02E-04	-4.18	RefSeq	FN3K	13283
chr1:173304729-173305259	531	15	2.02E-04	-4.18	RefSeq	TNN	1112
chr2:119321872-119322463	592	16	2.02E-04	-4.18	RefSeq	EN1	0
chr7:74962166-74962836	671	19	2.02E-04	-4.18	RefSeq	SPDYE5	0
chr2:130554518-130555056	539	15	2.02E-04	-4.18	RefSeq	POTEF	48210
chr20:31856636-31857197	562	16	2.02E-04	-4.18	ncRNA	ZNF341-AS1	5370

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.



chr9:68945121-68945763	643	18	1.94E-04	-4.18	ncRNA	LOC100133920	3940
chr6:159157369-159157796	428	12	1.94E-04	-4.18	RefSeq	EZR	2649
chr5:129117485-129118002	518	15	1.94E-04	-4.18	RefSeq	KIAA1024L	5702
chr19:61053263-61054978	1716	47	1.94E-04	-4.19	RefSeq	NLRP4	13507
chr7:102080991-102081559	569	16	1.94E-04	-4.19	RefSeq	SPDYE2	2983
chr16:2421001-2421383	383	11	1.94E-04	-4.19	RefSeq	CCNF	1605
chrX:119178110-119178587	478	14	1.94E-04	-4.2	RefSeq	RHOXF2B	1615
chr11:65139116-65139881	766	23	1.94E-04	-4.2	RefSeq	MAP3K11	-819
chr3:75797511-75798089	579	16	1.94E-04	-4.21	RefSeq	FRG2C	1334
chr14:89105559-89106080	522	15	1.94E-04	-4.21	RefSeq	FOXN3	49168
chr20:30812448-30813180	733	20	1.94E-04	-4.21	RefSeq	DNMT3B	-672
chr15:28161818-28162366	549	15	1.94E-04	-4.21	RefSeq	GOLGA8J	-84
chr7:72130437-72130929	493	14	1.86E-04	-4.21	ncRNA	SPDYE8P	7317
chrX:119896725-119897439	715	21	1.86E-04	-4.21	RefSeq	CT47A10	1255
chr5:41940790-41941175	386	11	1.86E-04	-4.21	RefSeq	C5orf51	563
chr3:152547166-152547678	513	11	1.86E-04	-4.21	RefSeq	P2RY12	37613
chr19:60075550-60075948	399	12	1.86E-04	-4.22	RefSeq	FCAR	-1413
chr5:154073913-154074496	584	13	1.86E-04	-4.22	RefSeq	LARP1	1258
chr15:20267123-20267655	533	13	1.86E-04	-4.22	ncRNA	GOLGA8DP	-30
chr20:45322557-45323075	519	15	1.86E-04	-4.22	RefSeq	ZMYND8	95966
chr2:208816038-208816612	575	17	1.86E-04	-4.22	RefSeq	IDH1	10816
chr17:37242654-37243076	423	12	1.86E-04	-4.22	RefSeq	NT5C3B	2974
chr5:68890263-68890876	614	17	1.86E-04	-4.23	RefSeq	GTF2H2C_2	-954
chr12:49884566-49885055	490	14	1.86E-04	-4.23	ncRNA	POU6F1	12690
chr2:73886628-73887047	420	12	1.86E-04	-4.23	RefSeq	C2orf78	21804
chr7:37381634-37382256	623	17	1.86E-04	-4.23	RefSeq	ELMO1	73199
chr9:125067166-125067755	590	17	1.86E-04	-4.23	RefSeq	STRBP	2922
chr4:79007221-79007689	469	13	1.86E-04	-4.23	RefSeq	MRPL1	4392
chr15:98939799-98941072	1274	36	1.86E-04	-4.23	RefSeq	LINS	18897
chr19:7002359-7002780	422	12	1.86E-04	-4.23	RefSeq	MBD3L2	2008
chr16:57090679-57091367	689	20	1.86E-04	-4.24	RefSeq	NDRG4	35184
chr16:56048453-56049211	759	22	1.86E-04	-4.24	RefSeq	COQ9	9615
chr7:22204300-22204840	541	16	1.86E-04	-4.24	RefSeq	RAPGEF5	158219
chr20:51634449-51635026	578	17	1.86E-04	-4.24	RefSeq	ZNF217	-1405
chr17:73390667-73391429	763	19	1.86E-04	-4.24	ncRNA	FLJ45079	336
chr2:110649097-110649542	446	13	1.86E-04	-4.24	ncRNA	LIMS3- LOC440895	15648
chr4:79407199-79407726	528	15	1.86E-04	-4.25	RefSeq	FRAS1	209451
chr8:67945885-67946413	529	15	1.86E-04	-4.25	RefSeq	MCMDC2	0
chr8:82558365-82558987	623	18	1.86E-04	-4.25	RefSeq	FABP4	-336

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

chr10:118189159-118189738	580	16	1.86E-04	-4.25	RefSeq	PNLIPRP3	11745
chr2:27445826-27446483	658	18	1.86E-04	-4.25	RefSeq	EIF2B4	346
chr7:6705790-6706144	355	11	1.86E-04	-4.25	RefSeq	ZNF12	6948
chrX:1533041-1533641	601	17	1.86E-04	-4.26	RefSeq	ASMTL	-385
chr16:22447937-22448558	622	18	1.86E-04	-4.26	RefSeq	NPIP5	15592
chr10:126841065-126841650	586	16	1.86E-04	-4.26	RefSeq	CTBP2	-1450
chr8:12033509-12034183	675	18	1.78E-04	-4.26	RefSeq	USP17L2	0
chr17:73966649-73967226	578	13	1.78E-04	-4.26	RefSeq	DNAH17	117846
chr8:107849507-107849882	376	11	1.78E-04	-4.26	RefSeq	ABRA	1767
chr1:1836018-1836621	604	17	1.78E-04	-4.27	RefSeq	CALML6	0
chr2:27201531-27201974	444	13	1.78E-04	-4.27	RefSeq	ABHD1	1370
chr1:231259429-231259941	513	15	1.78E-04	-4.27	RefSeq	PCNXL2	238142
chr14:80358521-80359050	530	15	1.78E-04	-4.27	RefSeq	CEP128	116588
chr7:74861271-74861810	540	16	1.70E-04	-4.28	RefSeq	TRIM73	-1029
chr16:18751921-18752377	457	13	1.62E-04	-4.28	RefSeq	SMG1	92851
chrX:49246232-49246793	562	16	1.53E-04	-4.29	RefSeq	GAGE2A	5170
chr3:47817869-47818406	538	16	1.53E-04	-4.29	RefSeq	DHX30	-997
chr10:75134615-75134996	382	11	1.53E-04	-4.29	ncRNA	BMS1P4	25283
chr15:28985419-28985987	569	16	1.53E-04	-4.29	RefSeq	FAN1	2051
chr9:138829492-138830017	526	15	1.53E-04	-4.29	RefSeq	RABL6	7297
chr10:75175946-75176434	489	14	1.53E-04	-4.3	RefSeq	SEC24C	1809
chrX:49245269-49245785	517	15	1.53E-04	-4.3	RefSeq	GAGE2A	4207
chr11:68432223-68432871	649	19	1.53E-04	-4.3	RefSeq	IGHMBP2	4328
chr1:53302141-53302910	770	15	1.37E-04	-4.31	RefSeq	PODN	1829
chr9:28136724-28137419	696	18	1.37E-04	-4.31	RefSeq	LINGO2	1065580
chr1:210860011-210860608	598	17	1.37E-04	-4.31	RefSeq	ATF3	54712
chr1:58784281-58784719	439	13	1.37E-04	-4.31	RefSeq	OMA1	316
chr1:109825013-109825862	850	23	1.37E-04	-4.31	RefSeq	SYPL2	14390
chrX:103386593-103387528	936	24	1.37E-04	-4.32	RefSeq	ESX1	-337
chr14:104360257-104360804	548	11	1.29E-04	-4.32	ncRNA	LINC00638	1674
chr7:101780102-101780688	587	16	1.29E-04	-4.32	RefSeq	SPDYE6	2922
chr1:28357801-28358323	523	15	1.29E-04	-4.32	RefSeq	PTAFR	17720
chr20:54395920-54396551	632	19	1.29E-04	-4.32	RefSeq	AURKA	4208
chr8:145711075-145711734	660	19	1.29E-04	-4.33	RefSeq	RECQL4	2285
chr1:240076337-240076864	528	15	1.29E-04	-4.33	RefSeq	EXO1	-1252
chr7:6707793-6708421	629	17	1.29E-04	-4.33	RefSeq	ZNF12	4671
chr9:666419-667039	621	18	1.29E-04	-4.33	RefSeq	KANK1	206125
chr12:3063887-3064732	846	18	1.29E-04	-4.34	RefSeq	TSPAN9	7105
chr12:105163796-105164336	541	13	1.29E-04	-4.34	RefSeq	CKAP4	1508

chr1:222370282-222370782	501	14	1.29E-04	-4.34	RefSeq	FBXO28	1870
chr11:117982740-117983443	704	19	1.29E-04	-4.35	RefSeq	PHLDB1	-73
chr13:40393475-40394212	738	21	1.29E-04	-4.35	ncRNA	SUGT1P3	0
chr2:102340408-102340929	522	15	1.29E-04	-4.35	RefSeq	IL18R1	1233
chr3:185498339-185498882	544	11	1.29E-04	-4.35	RefSeq	PSMD2	-698
chr17:37275062-37275600	539	11	1.29E-04	-4.35	RefSeq	KLHL11	0
chr19:9296370-9296810	441	13	1.13E-04	-4.36	RefSeq	ZNF559-ZNF177	468
chr11:63147912-63148405	494	14	1.13E-04	-4.36	RefSeq	ATL3	47618
chr3:49288273-49288805	533	15	1.13E-04	-4.36	RefSeq	C3orf62	708
chr2:118560844-118561362	519	15	1.13E-04	-4.36	RefSeq	INSIG2	-1158
chr7:73965741-73966367	627	18	1.13E-04	-4.36	ncRNA	PMS2P5	20918
chr20:61021825-61022381	557	16	1.13E-04	-4.36	RefSeq	DIDO1	5968
chr5:138241341-138241910	570	17	1.13E-04	-4.37	RefSeq	CTNNA1	124357
chrX:49070584-49071222	639	18	1.13E-04	-4.37	RefSeq	GAGE12J	5131
chr17:70912220-70912828	609	18	1.13E-04	-4.38	RefSeq	GRB2	557
chr7:47984028-47984519	492	14	1.13E-04	-4.38	RefSeq	HUS1	1229
chr1:160800082-160800446	365	11	1.13E-04	-4.38	RefSeq	UAP1	2162
chrX:49216646-49217224	579	17	1.13E-04	-4.38	RefSeq	GAGE12F	4291
chr9:108666353-108666925	573	15	1.13E-04	-4.38	RefSeq	ZNF462	1154
chrX:118582497-118583065	569	16	1.05E-04	-4.41	RefSeq	CXorf56	336
chr11:104279583-104280106	524	15	9.69E-05	-4.41	ncRNA	LOC643733	14007
chr5:176624406-176625238	833	22	9.69E-05	-4.41	RefSeq	NSD1	130967
chr11:123314848-123316000	1153	31	9.69E-05	-4.41	RefSeq	OR4D5	0
chr19:54707350-54707824	475	14	9.69E-05	-4.41	RefSeq	FCGRT	2
chr16:87751547-87752765	1219	35	9.69E-05	-4.42	ncRNA	LINC00304	-364
chr16:3082705-3083232	528	15	9.69E-05	-4.42	RefSeq	ZSCAN10	6088
chr1:166150157-166150783	627	18	9.69E-05	-4.42	RefSeq	ADCY10	-68
chr9:114104044-114104657	614	18	8.89E-05	-4.43	RefSeq	PTBP3	31109
chr3:47597637-47598207	571	16	8.89E-05	-4.45	RefSeq	CSPG5	-902
chr2:110648093-110648678	586	16	8.89E-05	-4.45	ncRNA	LIMS3- LOC440895	16512
chr19:46635988-46636823	836	19	8.89E-05	-4.46	RefSeq	ATP5SL	499
chr10:127579635-127580276	642	18	8.89E-05	-4.47	RefSeq	FANK1	4537
chr17:43370440-43371383	944	23	8.89E-05	-4.47	ncRNA	LOC100506325	2387
chr3:154364367-154364940	574	15	8.89E-05	-4.47	RefSeq	RAP2B	1676
chr14:65004279-65004834	556	15	8.89E-05	-4.47	RefSeq	FUT8	57216
chr7:101894663-101895288	626	17	8.89E-05	-4.47	RefSeq	LRWD1	2268
chr19:2232043-2232934	892	25	8.89E-05	-4.48	RefSeq	C19orf35	248
chr5:140166141-140166739	599	17	8.89E-05	-4.48	RefSeq	PCDHA1	20236
chr17:36235869-36236547	679	18	8.89E-05	-4.49	RefSeq	TMEM99	6906



chr2:51113197-51113869	673	19	8.89E-05	-4.5	RefSeq	NRXN1	-18
chr11:67109561-67110281	721	19	8.89E-05	-4.5	RefSeq	GSTP1	1919
chr10:76539876-76540427	552	16	8.89E-05	-4.5	RefSeq	DUSP13	-899
chr17:2181816-2182469	654	19	8.89E-05	-4.5	RefSeq	TSR1	4960
chr1:149486845-149487432	588	18	8.08E-05	-4.52	RefSeq	PIP5K1A	49200
chr10:48579108-48579736	629	18	8.08E-05	-4.52	ncRNA	GLUD1P7	6510
chr5:56147540-56148357	818	21	8.08E-05	-4.52	RefSeq	MAP3K1	883
chrX:227522-228210	689	19	8.08E-05	-4.53	RefSeq	PPP2R3B	39481
chr1:153288690-153289229	540	16	8.08E-05	-4.53	RefSeq	DCST1	15784
chr7:151568623-151569198	576	16	8.08E-05	-4.53	RefSeq	KMT2C	194826
chr5:43073035-43073731	697	19	8.08E-05	-4.54	ncRNA	LOC648987	29568
chr1:144022706-144023543	838	23	7.27E-05	-4.54	RefSeq	NBPF12	717754
chr7:44008532-44009145	614	17	6.46E-05	-4.56	RefSeq	SPDYE1	1518
chr8:70569455-70569985	531	11	6.46E-05	-4.56	RefSeq	SULF1	28042
chr16:3871392-3871948	557	16	6.46E-05	-4.56	RefSeq	CREBBP	-1269
chr10:7783971-7784425	455	14	6.46E-05	-4.56	RefSeq	ITIH2	-817
chr19:46952491-46953026	536	16	5.65E-05	-4.57	RefSeq	CEACAM6	1223
chrX:119903990-119904472	483	14	5.65E-05	-4.57	RefSeq	CT47A10	-435
chr7:73963431-73964056	626	18	5.65E-05	-4.57	ncRNA	PMS2P5	18608
chr1:226889574-226890257	684	18	5.65E-05	-4.58	ncRNA	RHOU	42557
chr3:33680724-33681298	575	16	5.65E-05	-4.58	RefSeq	CLASP2	53412
chr22:16616330-16616982	653	18	5.65E-05	-4.58	RefSeq	BID	20280
chr10:70675364-70675892	529	15	5.65E-05	-4.6	RefSeq	HKDC1	25299
chr16:28671193-28671704	512	14	5.65E-05	-4.61	RefSeq	NPIP9	0
chr19:2724299-2724924	626	17	5.65E-05	-4.61	RefSeq	SGTA	9431
chr22:49334801-49335387	587	16	5.65E-05	-4.61	RefSeq	KLHDC7B	1473
chr16:15380013-15380485	473	14	5.65E-05	-4.62	RefSeq	NPIPA5	-360
chr9:129255804-129256600	797	23	5.65E-05	-4.62	RefSeq	LRSAM1	2218
chr16:65814915-65815488	574	15	5.65E-05	-4.63	RefSeq	LRRC29	2915
chr5_h2_hap1:1006229-1006797	569	17	5.65E-05	-4.63	RefSeq	GTF2H2C_2	-936
chr16:30159356-30159831	476	14	4.85E-05	-4.64	ncRNA	LOC613037	4603
chr5:40871178-40871754	577	15	4.85E-05	-4.64	RefSeq	RPL37	-33
chr7:97830572-97831143	572	17	4.85E-05	-4.65	RefSeq	BAIAP2L1	37221
chr1:1658133-1658879	747	16	4.85E-05	-4.65	RefSeq	SLC35E2	8420
chr7:72139293-72139801	509	15	4.85E-05	-4.65	ncRNA	SPDYE8P	-1047
chr1:27574429-27574860	432	12	4.85E-05	-4.66	RefSeq	FCN3	-526
chr14:34656993-34657515	523	15	4.85E-05	-4.66	RefSeq	PPP2R3C	3756
chr1:27093219-27093906	688	20	4.85E-05	-4.67	RefSeq	GPATCH3	5644
chrX:152516355-152516757	403	12	4.85E-05	-4.67	RefSeq	FAM58A	1070

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.



chr16:22386546-22387343	798	23	4.85E-05	-4.69	ncRNA	SMG1P1	30716
chr10:46321812-46322350	539	12	4.85E-05	-4.72	ncRNA	FAM35BP	4165
chr7:72134877-72135546	670	19	4.04E-05	-4.74	ncRNA	SPDYE8P	2700
chr3:64649742-64650549	808	20	3.23E-05	-4.75	RefSeq	ADAMTS9	-1336
chr8:92151917-92152588	672	19	3.23E-05	-4.76	RefSeq	OTUD6B	317
chr7:143679710-143680197	488	14	3.23E-05	-4.76	ncRNA	OR2A1-AS1	3548
chr5_h2_hap1:626640-627165	526	16	3.23E-05	-4.77	ncRNA	SMA4	5613
chr7:143526829-143527310	482	14	2.42E-05	-4.79	ncRNA	LOC101928605	3482
chr2:73867035-73867454	420	12	2.42E-05	-4.79	RefSeq	C2orf78	2211
chr3:190986694-190987593	900	20	2.42E-05	-4.85	RefSeq	TP63	154784
chr2:87589733-87590303	571	17	2.42E-05	-4.86	ncRNA	LINC00152	53644
chr17:36792212-36792764	553	16	2.42E-05	-4.86	RefSeq	KRT34	-49
chr16:28276611-28277085	475	14	2.42E-05	-4.88	RefSeq	NPIP6	4598
chr5:172253049-172253643	595	15	2.42E-05	-4.92	RefSeq	ERGIC1	59220
chr8:7871010-7871637	628	16	1.62E-05	-4.95	RefSeq	USP17L3	1281
chr7:77370775-77371396	622	14	8.08E-06	-4.98	RefSeq	PHTF2	63392
chr13:19621964-19622822	859	24	8.08E-06	-5	RefSeq	GJA3	10362
chr16:29368415-29368963	549	15	8.08E-06	-5.01	ncRNA	LOC606724	248
chr7:74805232-74805841	610	18	8.08E-06	-5.02	ncRNA	SPDYE8P	2736
chr9:32977690-32978461	772	21	8.08E-06	-5.03	RefSeq	APTX	13179
chr19:8951795-8952424	630	18	8.08E-06	-5.04	RefSeq	MUC16	595
chr12:52710794-52711458	665	19	8.08E-06	-5.04	RefSeq	HOXC6	2333
chr16:30160662-30161325	664	17	8.08E-06	-5.05	ncRNA	LOC613037	3109
chr16:70305676-70306366	691	19	8.08E-06	-5.05	RefSeq	PHLPP2	879
chr1:29427712-29428275	564	16	8.08E-06	-5.08	RefSeq	MECR	1783
chr11:4571383-4572309	927	26	8.08E-06	-5.08	RefSeq	OR52I1	0
chr17:26676990-26677490	501	14	8.08E-06	-5.11	RefSeq	NF1	230919
chr2:112957662-112958271	610	18	8.08E-06	-5.11	RefSeq	TTL	1448
chr21:43795398-43796193	796	22	8.08E-06	-5.12	RefSeq	HSF2BP	107610
chr17:3994012-3994804	793	20	8.08E-06	-5.12	RefSeq	CYB5D2	348
chr5:52893848-52894499	652	18	8.08E-06	-5.13	RefSeq	NDUFS4	1626
chr17:7540634-7541023	390	12	8.08E-06	-5.13	RefSeq	WRAP53	10520
chr4:8958574-8960106	1533	40	8.08E-06	-5.13	RefSeq	USP17L25	0
chr7:1084246-1085016	771	22	8.08E-06	-5.15	RefSeq	C7orf50	59404
chr11:122974772-122975365	594	17	8.08E-06	-5.16	RefSeq	GRAMD1B	73218
chr2:67479271-67480097	827	24	8.08E-06	-5.17	RefSeq	ETAA1	1325
chr4:8963612-8964816	1205	31	8.08E-06	-5.17	RefSeq	USP17L25	0
chr12:119036609-119037389	781	22	8.08E-06	-5.17	RefSeq	RAB35	1638
chr4:166426371-166426974	604	17	8.08E-06	-5.17	RefSeq	KLHL2	75750



chr7:101981652-101982330	679	19	8.08E-06	-5.17	RefSeq	SPDYE2	2874
chrX:49207087-49207665	579	17	8.08E-06	-5.17	RefSeq	GAGE12F	4285
chr7:101588665-101589548	884	25	8.08E-06	-5.19	RefSeq	CUX1	342761
chr19:12049055-12049613	559	16	8.08E-06	-5.22	RefSeq	ZNF844	12509
chr16:14937943-14938425	483	14	8.08E-06	-5.22	RefSeq	NPIPA1	-376
chr3:195653574-195654080	507	15	8.08E-06	-5.23	RefSeq	ATP13A3	16178
chr9:44942433-44943477	1045	25	8.08E-06	-5.23	ncRNA	LOC102723709	1810
chr19:57996669-57997255	587	17	8.08E-06	-5.25	RefSeq	ZNF28	19480
chr2:224607729-224608251	523	15	8.08E-06	-5.26	RefSeq	SERPINE2	4030
chr16:1597053-1597638	586	17	8.08E-06	-5.27	RefSeq	IFT140	4473
chr4:8954158-8955180	1023	26	8.08E-06	-5.29	RefSeq	USP17L25	0
chr20:25728433-25729326	894	22	8.08E-06	-5.3	ncRNA	FAM182B	602
chr8:12474442-12475099	658	19	8.08E-06	-5.31	ncRNA	LOC729732	92393
chr15:19001513-19002108	596	14	8.08E-06	-5.31	RefSeq	GOLGA6L6	5021
chrX:49069698-49070274	577	17	8.08E-06	-5.35	RefSeq	GAGE12J	4245
chr20:3840550-3841296	747	21	8.08E-06	-5.38	RefSeq	PANK2	23064
chr16:30165093-30165926	834	24	8.08E-06	-5.38	ncRNA	LOC613037	-659
chr16:2529373-2530011	639	18	8.08E-06	-5.42	RefSeq	PDPK1	1407
chr7:74779567-74780409	843	24	8.08E-06	-5.43	ncRNA	SPDYE8P	5098
chr16:22446368-22446970	603	18	8.08E-06	-5.44	RefSeq	NPIP5	14023
chr15:48846611-48847254	644	19	8.08E-06	-5.44	RefSeq	SPPL2A	-1408
chr10:45411212-45411849	638	18	8.08E-06	-5.45	RefSeq	42071	-851
chr17:9507973-9508510	538	12	8.08E-06	-5.45	RefSeq	USP43	18394
chr8:27520073-27520407	335	10	8.08E-06	-5.46	RefSeq	CLU	7839
chr16:14751309-14751795	487	14	8.08E-06	-5.5	RefSeq	NPIPA3	-376
chr1:144016867-144017565	699	19	8.08E-06	-5.54	RefSeq	NBPF12	711915
chr16:30150024-30150672	649	19	8.08E-06	-5.55	ncRNA	LOC613037	13762
chr21:44661694-44662362	669	18	8.08E-06	-5.61	RefSeq	TRPM2	63782
chr19:11187013-11187745	733	21	8.08E-06	-5.65	RefSeq	DOCK6	46424
chr7:143620357-143621167	811	22	8.08E-06	-5.73	ncRNA	LOC101928605	97010
chr16:30145614-30146327	714	20	8.08E-06	-6.01	ncRNA	LOC613037	18107
chr1:93316250-93316886	637	18	8.08E-06	-6.06	RefSeq	MTF2	-494
chr1:244204571-244206821	2251	51	8.08E-06	-6.07	RefSeq	SMYD3	530447
chr16:22450720-22451359	640	18	8.08E-06	-6.07	RefSeq	NPIP5	18375
chr1:31121926-31122834	909	25	8.08E-06	-6.08	RefSeq	SDC3	31234
chr18:42807034-42807795	762	19	8.08E-06	-6.1	RefSeq	KATNAL2	26249
chr8:7178278-7179293	1016	26	8.08E-06	-6.13	RefSeq	USP17L1	959
chr5:69535062-69535636	575	13	8.08E-06	-6.14	ncRNA	SMA4	21743
chr1:144030100-144031194	1095	29	8.08E-06	-6.15	RefSeq	NBPF12	725148

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.



# CHEST<sup>®</sup> Online Supplement

chr20:61981012-61982307	1296	36	8.08E-06	-6.17	RefSeq	TPD52L2	13987
chr7:99744290-99744954	665	19	8.08E-06	-6.18	RefSeq	SPDYE3	1029
chr5:69533183-69533708	526	16	8.08E-06	-6.22	ncRNA	SMA4	23671
chr4:8973243-8974307	1065	27	8.08E-06	-6.23	RefSeq	USP17L25	0
chr7:66383574-66384230	657	18	8.08E-06	-6.23	ncRNA	PMS2P4	20635
chr4:8970088-8971284	1197	32	8.08E-06	-6.32	RefSeq	USP17L10	881
chr5:70122606-70123134	529	15	8.08E-06	-6.42	ncRNA	SMA4	71091
chr16:16349723-16350468	746	21	8.08E-06	-7.14	ncRNA	PKD1P1	30756
chr18:42801111-42801880	770	19	8.08E-06	-7.26	RefSeq	KATNAL2	20326
chrX:49235747-49236325	579	17	8.08E-06	-7.48	RefSeq	GAGE12C	4251
chr4:8974870-8976030	1161	31	8.08E-06	-7.48	RefSeq	USP17L25	917
chr7:102082410-102083101	692	19	8.08E-06	-7.49	RefSeq	SPDYE2	4402
chr4:8960200-8961794	1595	43	8.08E-06	-7.65	RefSeq	USP17L25	483
chr22:45891632-45892379	748	21	8.08E-06	-7.97	RefSeq	TBC1D22A	354454
chr4:8955853-8957049	1197	32	8.08E-06	-8.06	RefSeq	USP17L25	881
chr4:8965343-8966539	1197	32	8.08E-06	-8.25	RefSeq	USP17L25	881
chr5:70120678-70121268	591	14	8.08E-06	-8.94	ncRNA	SMA4	69163

**e-Table 4:** Gene-associated DMRs between PRE and POST groups.

Coordinates	Length	# probes	p-value	MAT-score	Transcript type	Gene symbol	Distance to TSS
chr18:75725595-75727061	1467	40	8.08E-06	6.34	RefSeq	KCNG2	939
chr11:111248820-111249661	842	24	8.08E-06	6.1	RefSeq	ALG9	-1304
chr17:77910324-77911148	825	18	8.08E-06	6.04	RefSeq	TEX19	0
chr22:48948622-48949878	1257	34	8.08E-06	5.52	RefSeq	PANX2	-1409
chr9:72218932-72219646	715	20	8.08E-06	5.35	RefSeq	KLF9	0
chr1:55277778-55278666	889	22	8.08E-06	5.31	RefSeq	PCSK9	41
chr19:7008172-7009009	838	25	8.08E-06	5.3	RefSeq	MBD3L3	637
chr11:2881744-2882577	834	19	8.08E-06	5.23	RefSeq	SLC22A18	1656
chr17:35097485-35098366	882	25	8.08E-06	5.21	RefSeq	ERBB2	0
chr12:113329046-113329897	852	24	8.08E-06	5.11	RefSeq	TBX5	734
chr2:72997421-72998042	622	17	8.08E-06	5.11	RefSeq	EMX1	-70
chr15:98914126-98916379	2254	59	8.08E-06	5.07	ncRNA	PRKXP1	633
chr8:347618-348380	763	22	8.08E-06	5.04	RefSeq	FBXO25	810
chr9:139186433-139187221	789	20	8.08E-06	5.04	RefSeq	TMEM210	-113
chr7:27172252-27172907	656	19	8.08E-06	5.01	RefSeq	HOXA9	-577
chr17:23901780-23902431	652	16	8.08E-06	5.01	RefSeq	UNC119	1343
chr2:46600411-46601179	769	22	1.62E-05	4.95	RefSeq	ATP6V1E2	0
chr3:46717877-46718651	775	22	1.62E-05	4.79	RefSeq	TMIE	50
chr19:58387162-58387770	609	18	2.42E-05	4.74	RefSeq	ZNF665	662
chr10:44817627-44818496	870	25	2.42E-05	4.73	RefSeq	C10orf25	-1150
chr4:104161782-104162598	817	23	3.23E-05	4.72	RefSeq	SLC9B1	-1436
chr17:52345523-52346023	501	14	3.23E-05	4.71	RefSeq	TRIM25	386
chr5:55564379-55564956	578	16	4.04E-05	4.69	RefSeq	ANKRD55	0
chr5:147422468-147423134	667	18	4.04E-05	4.68	RefSeq	SPINK5	-594
chr14:100362766-100363624	859	24	4.85E-05	4.67	ncRNA	MEG3	568
chr15:32180417-32181036	620	18	4.85E-05	4.67	RefSeq	EMC7	310
chr1:156230180-156230748	569	16	5.65E-05	4.65	RefSeq	KIRREL	493
chr6:50895875-50896502	628	16	5.65E-05	4.65	RefSeq	TFAP2B	1477
chr15:83325685-83326229	545	14	5.65E-05	4.64	RefSeq	PDE8A	937
chr11:124485958-124486529	572	16	5.65E-05	4.63	RefSeq	TMEM218	286
chr5:14195580-14196164	585	16	5.65E-05	4.62	RefSeq	TRIO	-665
chr14:24115524-24116329	806	23	6.46E-05	4.62	RefSeq	CTSG	-217
chr7:86617609-86618187	579	16	6.46E-05	4.61	RefSeq	DMTF1	-1426
chr17:18069275-18069786	512	11	6.46E-05	4.58	RefSeq	LLGL1	0
chrX:70280593-70281363	771	22	7.27E-05	4.57	RefSeq	NLGN3	-43
chr4:109312508-109313093	586	17	8.08E-05	4.56	ncRNA	LEF1-AS1	0

chr8:95974250-95974863	614	18	8.89E-05	4.56	RefSeq	CCNE2	1796
chr19:10807192-10807762	571	16	9.69E-05	4.56	RefSeq	TMED1	222
chr17:37792928-37793757	830	23	9.69E-05	4.55	RefSeq	STAT3	283
chr20:62266436-62267027	592	17	1.05E-04	4.52	RefSeq	MYT1	165
chr13:45523147-45523702	556	16	1.05E-04	4.51	RefSeq	ZC3H13	1196
chr6:32481602-32482408	807	22	1.05E-04	4.51	RefSeq	BTNL2	471
chr8:125532040-125532675	636	18	1.13E-04	4.49	RefSeq	TRMT12	0
chr6:35803227-35803838	612	18	1.13E-04	4.49	RefSeq	FKBP5	501
chr12:16391275-16391910	636	18	1.29E-04	4.47	RefSeq	MGST1	0
chr20:13921702-13922422	721	20	1.29E-04	4.46	ncRNA	SEL1L2	1558
chr1:159367892-159368526	635	18	1.29E-04	4.44	RefSeq	DEDD	577
chr7:79978606-79979120	515	14	1.29E-04	4.43	RefSeq	GNAT3	59
chr3:127904943-127905653	711	20	1.29E-04	4.43	RefSeq	CHCHD6	-100
chr11:61315987-61316672	686	19	1.29E-04	4.43	RefSeq	FEN1	-13
chr3:130203764-130204448	685	20	1.29E-04	4.42	RefSeq	EFCC1	602
chr1:120415201-120415876	676	19	1.29E-04	4.42	RefSeq	NOTCH2	-1360
chr8:131019094-131019923	830	23	1.37E-04	4.41	RefSeq	FAM49B	1378
chr4:187350186-187350767	582	16	1.37E-04	4.4	RefSeq	CYP4V2	518
chr12:116023515-116024039	525	15	1.37E-04	4.4	ncRNA	TESC-AS1	1860
chr1:102085108-102085698	591	16	1.45E-04	4.39	RefSeq	OLFM3	0
chr14:88327188-88327795	608	17	1.45E-04	4.39	RefSeq	EML5	1055
chr1:201587156-201587695	540	12	1.45E-04	4.39	RefSeq	FMOD	0
chr4:77152550-77153171	622	18	1.53E-04	4.38	RefSeq	ART3	1193
chr19:7647341-7647940	600	18	1.53E-04	4.37	RefSeq	MCEMP1	-3
chr3:125295211-125295823	613	14	1.70E-04	4.37	RefSeq	KALRN	-425
chr9:131636807-131637307	501	15	1.78E-04	4.36	RefSeq	USP20	-210
chr2:128284444-128284960	517	15	1.78E-04	4.36	RefSeq	WDR33	272
chr12:119117013-119117590	578	16	1.78E-04	4.36	RefSeq	GCN1L1	-116
chr3:44259790-44260366	577	16	1.86E-04	4.36	RefSeq	TOPAZ1	1408
chr17:2915143-2915737	595	17	1.86E-04	4.36	RefSeq	OR1D5	-1491
chr2:217205308-217205845	538	15	1.86E-04	4.36	RefSeq	IGFBP2	-527
chr19:53866440-53867202	763	21	2.02E-04	4.34	RefSeq	NTN5	875
chr4:141483934-141484580	647	15	2.02E-04	4.34	RefSeq	SCOC	0
chr10:74683255-74683882	628	18	2.02E-04	4.34	RefSeq	MRPS16	-797
chr11:101827602-101828261	660	19	2.02E-04	4.33	RefSeq	TMEM123	725
chr8:96351025-96351839	815	19	2.02E-04	4.33	RefSeq	C8orf37	-386
chr17:61731217-61731820	604	17	2.02E-04	4.33	RefSeq	PRKCA	1829
chr9:38413606-38414103	498	14	2.02E-04	4.33	RefSeq	IGFBPL1	342
chr10:70330227-70330907	681	14	2.02E-04	4.32	RefSeq	DDX50	-133



chr4:141663390-141663906	517	15	2.02E-04	4.32	RefSeq	ELMOD2	-856
chr5:112283649-112284171	523	14	2.02E-04	4.31	RefSeq	REEP5	1760
chr17:44007445-44008019	575	16	2.02E-04	4.31	RefSeq	HOXB3	-635
chr3:89237532-89238125	594	17	2.02E-04	4.31	RefSeq	EPHA3	-1239
chr1:110975779-110976589	811	22	2.02E-04	4.31	RefSeq	KCNA2	-159
chr2:3362888-3363402	515	11	2.02E-04	4.31	RefSeq	TRAPPC12	435
chr5:86742542-86743246	705	20	2.02E-04	4.31	RefSeq	CCNH	1232
chr3:8787041-8787708	668	16	2.02E-04	4.31	RefSeq	OXTR	-740
chr4:30330498-30331095	598	14	2.02E-04	4.31	RefSeq	PCDH7	-40
chr12:9776758-9777310	553	16	2.02E-04	4.3	RefSeq	CLECL1	0
chr6:168220260-168220775	516	14	2.02E-04	4.3	RefSeq	FRMD1	-864
chr1:158268658-158269224	567	13	2.02E-04	4.3	RefSeq	PIGM	-250
chr1:111735264-111735964	701	18	2.02E-04	4.3	ncRNA	PGCP1	-1267
chr14:22946829-22947377	549	16	2.10E-04	4.29	RefSeq	MYH6	0
chr19:14798232-14798886	655	18	2.10E-04	4.29	RefSeq	OR7A5	1391
chr11:626516-627152	637	17	2.10E-04	4.29	RefSeq	DRD4	-153
chrX:152792974-152793687	714	20	2.18E-04	4.29	RefSeq	L1CAM	1008
chr6:142508442-142508957	516	12	2.18E-04	4.28	RefSeq	VTA1	-1035
chr7:158341993-158342504	512	15	2.26E-04	4.28	RefSeq	WDR60	0
chr8:58355077-58355831	755	21	2.42E-04	4.27	ncRNA	LINC00588	421
chr21:39738942-39739541	600	17	2.42E-04	4.27	RefSeq	SH3BGR	-126
chr2:87830043-87830562	520	15	2.42E-04	4.27	RefSeq	PLGLB1	1318
chr2:20113420-20114124	705	20	2.42E-04	4.26	RefSeq	LAPTM4A	1147
chr16:31178628-31179349	722	18	2.42E-04	4.26	RefSeq	ITGAM	0
chr16:1930831-1931656	826	24	2.50E-04	4.26	RefSeq	MSRB1	1640
chr17:15844991-15845790	800	20	2.67E-04	4.26	RefSeq	ZSWIM7	-1259
chr1:173112099-173112788	690	20	2.67E-04	4.26	RefSeq	RABGAP1L	820
chr11:45071541-45072027	487	12	2.75E-04	4.25	ncRNA	PRDM11	-113
chrX:26143987-26144586	600	17	2.91E-04	4.25	RefSeq	MAGEB5	0
chr1:114103241-114103871	631	17	2.91E-04	4.25	RefSeq	PHTF1	0
chrX:134884972-134885636	665	19	2.91E-04	4.25	RefSeq	MMGT1	-1171
chr12:11353513-11354131	619	17	2.91E-04	4.25	RefSeq	PRB4	506
chr19:60361754-60362377	624	18	2.91E-04	4.24	RefSeq	TNNI3	-841
chr17:75367992-75368531	540	15	2.91E-04	4.24	RefSeq	CBX2	1420
chr1:205696237-205696739	503	11	2.91E-04	4.24	RefSeq	CR2	1969
chr22:19697957-19698496	540	16	2.91E-04	4.23	RefSeq	P2RX6	-946
chr3:52064416-52064947	532	16	2.91E-04	4.23	RefSeq	DUSP7	555
chr7:139122919-139123416	498	15	2.91E-04	4.23	RefSeq	HIPK2	747
chrX:41433822-41434476	655	18	2.91E-04	4.23	RefSeq	GPR34	652

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.



chr3:197118841-197119420	580	17	2.99E-04	4.23	RefSeq	TNK2	858
chr19:55999590-56000145	556	16	3.07E-04	4.22	RefSeq	C19orf48	0
chr13:40452845-40453337	493	13	3.15E-04	4.21	RefSeq	ELF1	1082
chr19:40534735-40535226	492	13	3.15E-04	4.21	RefSeq	FFAR1	450
chr1:202448402-202448923	522	15	3.15E-04	4.21	RefSeq	GOLT1A	921
chr2:132890677-132891225	549	15	3.15E-04	4.21	RefSeq	GPR39	60
chr17:53759381-53760270	890	25	3.15E-04	4.2	RefSeq	BZRAP1	882
chr16:55261543-55262144	602	17	3.15E-04	4.2	RefSeq	MT1H	316
chr1:7835644-7836156	513	15	3.15E-04	4.2	RefSeq	UTS2	0
chr15:90737238-90737722	485	13	3.15E-04	4.19	RefSeq	ST8SIA2	-422
chr18:28305386-28305864	479	12	3.15E-04	4.19	RefSeq	GAREM	-940
chr10:61571876-61572395	520	15	3.23E-04	4.19	RefSeq	ANK3	-1095
chr15:75499634-75500291	658	19	3.31E-04	4.19	RefSeq	HMG20A	-7
chr14:60517942-60518558	617	18	3.39E-04	4.19	RefSeq	SLC38A6	357
chrX:57164360-57164951	592	16	3.47E-04	4.19	RefSeq	SPIN2B	0
chr9:21219621-21220229	609	17	3.47E-04	4.18	RefSeq	IFNA17	-1399
chr22:45402065-45402606	542	17	3.47E-04	4.18	RefSeq	GRAMD4	743
chr5:172688513-172689023	511	14	3.47E-04	4.18	RefSeq	STC2	90
chr9:94471489-94472075	587	16	3.47E-04	4.18	RefSeq	IPPK	294
chr20:43029178-43029668	491	14	3.64E-04	4.17	RefSeq	STK4	644
chr9:42009000-42009518	519	14	3.64E-04	4.17	ncRNA	KGFLP2	67
chrX:86659146-86659680	535	15	3.72E-04	4.17	RefSeq	KLHL4	0
chr9:135315024-135315555	532	13	3.72E-04	4.17	RefSeq	CACFD1	116
chr9:86472391-86472924	534	15	3.72E-04	4.17	RefSeq	NTRK2	-1491
chr1:109851420-109851969	550	16	3.72E-04	4.17	RefSeq	AMIGO1	1891
chr11:65303829-65304330	502	15	3.72E-04	4.16	RefSeq	AP5B1	309
chrX:10762861-10763610	750	17	3.72E-04	4.16	RefSeq	MID1	-1130
chr5:36640647-36641180	534	15	3.72E-04	4.16	RefSeq	SLC1A3	-1034
chr9:103542018-103542599	582	17	3.72E-04	4.16	RefSeq	GRIN3A	-1334
chr1:154449301-154449787	487	14	3.72E-04	4.15	RefSeq	PMF1	0
chr1:19795766-19796287	522	16	3.72E-04	4.15	RefSeq	MINOS1	0
chr19:15612230-15612750	521	14	3.72E-04	4.15	RefSeq	CYP4F3	0
chr5:61735065-61735795	731	20	3.72E-04	4.15	RefSeq	DIMT1	0
chr20:33462295-33462958	664	14	3.72E-04	4.15	RefSeq	UQCC1	402
chrX:68317487-68318204	718	21	3.80E-04	4.15	ncRNA	LINC00269	1362
chr12:49705088-49705584	497	10	3.80E-04	4.15	RefSeq	SLC11A2	883
chr4:69851139-69851925	787	21	3.80E-04	4.15	RefSeq	UGT2A3	174
chr3:123034870-123035390	521	15	3.80E-04	4.15	RefSeq	IQCB1	1227
chr10:103103897-103104410	514	15	3.80E-04	4.14	RefSeq	BTRC	117

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

chr2:27968622-27968986	365	11	3.80E-04	4.14	RefSeq	BRE	1636
chr10:105026228-105026782	555	16	3.88E-04	4.14	RefSeq	INA	-128
chr11:95164442-95165033	592	17	3.88E-04	4.14	RefSeq	CEP57	1169
chr8:144171620-144172275	656	19	3.88E-04	4.14	RefSeq	LY6E	343
chr14:44676764-44677252	489	14	3.88E-04	4.14	RefSeq	FANCM	1878
chr11:3211540-3212316	777	22	3.88E-04	4.14	RefSeq	MRGPRE	-1347
chr6:44234228-44235124	897	24	3.96E-04	4.14	RefSeq	CAPN11	0
chr4:1273552-1274066	515	12	3.96E-04	4.14	RefSeq	MAEA	0
chr3:26639863-26640589	727	21	3.96E-04	4.13	RefSeq	LRRC3B	559
chr4:184660849-184661467	619	16	3.96E-04	4.13	ncRNA	LOC389247	1196
chr14:89597066-89597858	793	21	3.96E-04	4.13	RefSeq	KCNK13	-4
chr9:113326547-113327270	724	21	3.96E-04	4.13	RefSeq	ZNF483	0
chr4:106692403-106693017	615	18	3.96E-04	4.13	RefSeq	ARHGEF38	-209
chr1:42158524-42159016	493	13	3.96E-04	4.12	ncRNA	HIVEP3	-1440
chr6:124000539-124001095	557	16	3.96E-04	4.12	RefSeq	TRDN	-601
chr8:143819866-143820432	567	17	3.96E-04	4.12	RefSeq	SLURP1	400
chr17:37143657-37144264	608	17	3.96E-04	4.12	RefSeq	HAP1	161
chr20:3695485-3695859	375	11	3.96E-04	4.12	RefSeq	C20orf27	594
chr5:148188191-148188822	632	18	3.96E-04	4.12	RefSeq	ADRB2	1842
chr11:4858573-4859105	533	15	3.96E-04	4.12	RefSeq	OR51T1	-520
chr22:16769606-16770250	645	19	3.96E-04	4.12	RefSeq	MICAL3	0
chr6:117694685-117695252	568	16	3.96E-04	4.12	RefSeq	VGLL2	1271
chr7:148591920-148592574	655	19	3.96E-04	4.12	RefSeq	ZNF783	1725
chr4:147778661-147779256	596	16	3.96E-04	4.12	RefSeq	POU4F2	-239
chrX:78508537-78509066	530	15	3.96E-04	4.11	RefSeq	ITM2A	640
chr6:55846016-55846516	501	13	4.04E-04	4.11	RefSeq	BMP5	1819
chr19:59735640-59736261	622	17	4.04E-04	4.11	ncRNA	KIR3DX1	0
chr20:14264174-14264708	535	15	4.04E-04	4.11	RefSeq	FLRT3	1606
chr3:159311175-159311841	667	19	4.04E-04	4.11	RefSeq	RSRC1	640
chr12:10657295-10657986	692	19	4.04E-04	4.11	RefSeq	MAGOHB	-450
chr17:24014352-24014927	576	16	4.04E-04	4.11	RefSeq	SUPT6H	923
chr6:147564767-147565506	740	19	4.04E-04	4.11	ncRNA	STXBP5-AS1	1938
chr10:111673758-111674297	540	16	4.12E-04	4.1	RefSeq	XPNPEP1	-456
chr1:156491827-156492393	567	16	4.12E-04	4.1	RefSeq	CD1A	1276
chr11:87710342-87710914	573	15	4.12E-04	4.1	RefSeq	CTSC	0
chr12:12763326-12764142	817	23	4.12E-04	4.1	RefSeq	CDKN1B	1855
chr17:55325558-55326055	498	14	4.12E-04	4.1	RefSeq	TUBD1	-469
chr12:21699823-21700341	519	15	4.12E-04	4.1	RefSeq	LDHB	1655
chr6:49711535-49712056	522	15	4.12E-04	4.09	RefSeq	RHAG	491





chr11:65858859-65859463	605	17	4.12E-04	4.09	RefSeq	RIN1	1114
chrX:119380743-119381242	500	15	4.12E-04	4.09	RefSeq	ATP1B4	775
chr10:98019171-98019958	788	22	4.12E-04	4.09	RefSeq	BLNK	1366
chr12:81276917-81277423	507	15	4.20E-04	4.09	RefSeq	CCDC59	-586
chr17:70100019-70100609	591	16	4.20E-04	4.08	RefSeq	CD300LD	-53
chr7:45893848-45894427	580	17	4.20E-04	4.08	RefSeq	IGFBP1	-57
chr17:43375823-43376342	520	12	4.20E-04	4.08	RefSeq	PNPO	1935
chr1:36700430-36700963	534	15	4.20E-04	4.08	RefSeq	MRPS15	1665
chr7:96490236-96490745	510	13	4.20E-04	4.08	RefSeq	DLX5	1335
chr19:6452143-6452682	540	16	4.28E-04	4.08	RefSeq	TUBB4A	1178
chr19:44083123-44083764	642	18	4.28E-04	4.08	RefSeq	SIRT2	-780
chr1:148021425-148021938	514	15	4.28E-04	4.08	RefSeq	FCGR1A	551
chr15:39032271-39032798	528	14	4.28E-04	4.07	RefSeq	CHAC1	-130
chr19:59541047-59541564	518	15	4.28E-04	4.07	RefSeq	LILRA4	670
chr1:247118324-247118909	586	16	4.28E-04	4.07	RefSeq	ZNF692	840
chr6:30018354-30018869	516	15	4.28E-04	4.07	RefSeq	HLA-A	128
chr8:6551463-6552000	538	15	4.28E-04	4.07	RefSeq	AGPAT5	-1286
chr6:29663282-29663791	510	15	4.44E-04	4.07	RefSeq	OR2H2	0
chr19:842506-843348	843	23	4.44E-04	4.07	RefSeq	MED16	871
chr11:89179705-89180353	649	18	4.44E-04	4.07	RefSeq	TRIM49	1039
chr14:91575455-91576037	583	16	4.44E-04	4.07	RefSeq	TRIP11	120
chr6:119713857-119714442	586	16	4.52E-04	4.06	RefSeq	MAN1A1	-1226
chr20:52526449-52526983	535	15	4.52E-04	4.06	RefSeq	DOK5	1031
chr17:55536128-55536739	612	18	4.60E-04	4.06	ncRNA	LOC653653	-1065
chr9:97119166-97119710	545	12	4.69E-04	4.05	RefSeq	FANCC	103
chr15:30694519-30695055	537	14	4.69E-04	4.05	RefSeq	ARHGAP11A	0
chr1:10994985-10995674	690	20	4.69E-04	4.05	RefSeq	TARDBP	0
chr1:203279081-203279638	558	16	4.69E-04	4.05	RefSeq	CNTN2	118
chr17:34575439-34576095	657	19	4.77E-04	4.05	RefSeq	ARL5C	0
chr17:1567431-1567937	507	15	4.77E-04	4.05	RefSeq	WDR81	864
chr4:47182116-47182762	647	19	4.77E-04	4.05	RefSeq	ATP10D	0
chr1:53159156-53159664	509	13	4.85E-04	4.04	RefSeq	ECHDC2	371
chr8:125250934-125251439	506	14	4.85E-04	4.04	ncRNA	FER1L6-AS2	1506
chr4:54788673-54789247	575	17	4.85E-04	4.04	RefSeq	PDGFRA	-774
chr12:48221186-48221832	647	15	4.85E-04	4.04	RefSeq	KCNH3	1979
chr3:157756232-157756728	497	14	4.93E-04	4.04	RefSeq	SSR3	-564
chr1:42393011-42393457	447	13	4.93E-04	4.04	RefSeq	GUCA2B	1332
chr1:115124422-115124978	557	15	4.93E-04	4.04	RefSeq	SIKE1	0
chr2:42874740-42875273	534	15	4.93E-04	4.04	RefSeq	HAAO	-1484

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.



chr8:86537708-86538216	509	15	4.93E-04	4.04	RefSeq	CA3	-92
chr7:77165053-77165642	590	17	4.93E-04	4.04	RefSeq	RSBN1L	1374
chr9:93161853-93162571	719	20	4.93E-04	4.03	RefSeq	AUH	1457
chr13:102515003-102515510	508	15	5.09E-04	4.03	RefSeq	SLC10A2	1688
chr15:33626709-33627262	554	14	5.09E-04	4.03	RefSeq	DPH6	-1012
chr6:27886132-27886664	533	15	5.09E-04	4.03	RefSeq	HIST1H3H	311
chr12:5023488-5024237	750	22	5.09E-04	4.03	RefSeq	KCNA5	142
chr11:65117483-65118334	852	20	5.09E-04	4.03	RefSeq	KCNK7	1710
chr15:20636683-20637176	494	15	5.09E-04	4.03	RefSeq	NIPA1	1109
chr17:36348005-36348515	511	13	5.25E-04	4.02	RefSeq	KRT23	-583
chr3:145174164-145174690	527	15	5.25E-04	4.02	RefSeq	C3orf58	-167
chr5:147142755-147143369	615	17	5.33E-04	4.02	RefSeq	JAKMIP2	-150
chr1:66990317-66990800	484	14	5.33E-04	4.02	RefSeq	TCTEX1D1	0
chr11:47154987-47155532	546	15	5.33E-04	4.02	RefSeq	ARFGAP2	0
chr16:85099168-85099830	663	19	5.33E-04	4.02	ncRNA	FENDRR	138
chr5:179152284-179152771	488	14	5.33E-04	4.02	RefSeq	LTC4S	-821
chr12:104249213-104249790	578	15	5.33E-04	4.02	RefSeq	C12orf75	669
chr8:87311339-87311853	515	14	5.33E-04	4.02	RefSeq	SLC7A13	0
chr19:55070824-55071322	499	14	5.33E-04	4.02	RefSeq	AKT1S1	1135
chr8:67253002-67253504	503	12	5.33E-04	4.02	RefSeq	CRH	0
chr18:8706170-8706706	537	15	5.33E-04	4.01	RefSeq	MTCL1	-663
chr6:29120362-29120949	588	17	5.33E-04	4.01	RefSeq	OR2W1	0
chr18:59965509-59966000	492	14	5.33E-04	4.01	ncRNA	LINC00305	1241
chr6:99904255-99904750	496	13	5.33E-04	4.01	RefSeq	FAXC	-2
chr15:31326240-31326772	533	15	5.33E-04	4.01	ncRNA	TMCO5B	277
chr10:95505728-95506264	537	15	5.41E-04	4.01	RefSeq	LGI1	-1292
chr1:218769421-218770104	684	19	5.41E-04	4	RefSeq	MARK1	1273
chr1:210673606-210674174	569	14	5.41E-04	4	RefSeq	NENF	754
chr8:19839014-19839547	534	15	5.41E-04	4	RefSeq	LPL	-1315
chr18:55718259-55718935	677	18	5.41E-04	4	RefSeq	PMAIP1	87
chr7:89712014-89712712	699	19	5.41E-04	4	RefSeq	CFAP69	0
chr6:2121367-2121873	507	11	5.41E-04	4	RefSeq	GMDS	-142
chr6:111910063-111910690	628	16	5.41E-04	4	RefSeq	REV3L	922
chr12:94777043-94777789	747	22	5.49E-04	4	RefSeq	SNRPF	203
chr12:120724462-120724974	513	14	5.49E-04	4	ncRNA	LINC01089	800
chr11:71501658-71502156	499	14	5.57E-04	4	RefSeq	ANAPC15	-187
chr5:174355246-174355754	509	15	5.57E-04	4	ncRNA	FLJ16171	0
chr1:16215629-16216260	632	17	5.74E-04	4	RefSeq	HSPB7	1613
chr11:59804665-59805155	491	15	5.74E-04	3.99	RefSeq	MS4A4A	75

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

chr3:166276538-166277034	497	10	5.74E-04	3.99	RefSeq	SI	1944
chr15:38436921-38437412	492	11	5.82E-04	3.99	RefSeq	DISP2	-314
chr15:41697781-41698278	498	13	6.06E-04	3.99	RefSeq	STRC	13
chrX:17304279-17304793	515	15	6.06E-04	3.99	RefSeq	NHS	815
chr3:1110163-1110663	501	14	6.06E-04	3.99	RefSeq	CNTN6	821
chr4:55908716-55909303	588	17	6.14E-04	3.98	RefSeq	SRD5A3	1571
chr6:35853334-35853672	339	10	6.14E-04	3.98	RefSeq	CLPSL2	985
chr7:141125605-141126118	514	15	6.22E-04	3.98	RefSeq	TAS2R4	847
chr3:187563234-187563771	538	15	6.38E-04	3.98	RefSeq	DGKG	-516
chr17:30499348-30499734	387	12	6.38E-04	3.97	RefSeq	UNC45B	399
chr17:72787498-72788081	584	17	6.38E-04	3.97	RefSeq	42256	-1006
chr16:14631250-14631794	545	13	6.38E-04	3.97	RefSeq	PARN	0
chr14:74418347-74418841	495	11	6.46E-04	3.97	RefSeq	DLST	0
chr9:124731890-124732403	514	14	6.46E-04	3.96	RefSeq	ZBTB26	1198
chr19:14390838-14391370	533	15	6.54E-04	3.96	RefSeq	DDX39A	0
chr18:27153186-27153705	520	15	6.54E-04	3.96	RefSeq	DSG1	1136
chr15:76173777-76174288	512	14	6.54E-04	3.96	RefSeq	SH2D7	1795
chr4:123594655-123595129	475	11	6.54E-04	3.96	RefSeq	IL2	1972
chr1:204709637-204710154	518	16	6.54E-04	3.96	RefSeq	IKBKE	-55
chr16:88082991-88083502	512	13	6.87E-04	3.95	RefSeq	ANKRD11	969
chr14:57833435-57833923	489	14	6.95E-04	3.95	RefSeq	ARID4A	-1052
chr10:59696444-59696942	499	14	7.11E-04	3.94	RefSeq	IPMK	759
chr1:160304829-160305314	486	14	7.19E-04	3.94	RefSeq	NOS1AP	-891
chr3:48646920-48647425	506	14	7.19E-04	3.94	RefSeq	SLC26A6	-636
chr7:66097212-66097710	499	14	7.19E-04	3.94	RefSeq	SBDS	314
chr3:115496626-115497131	506	15	7.19E-04	3.94	RefSeq	TIGIT	1103
chr2:53848786-53849273	488	14	7.35E-04	3.94	RefSeq	CHAC2	353
chr19:35553375-35553896	522	15	7.35E-04	3.93	RefSeq	ZNF536	-1272
chr7:94375444-94375956	513	14	7.35E-04	3.93	RefSeq	PPP1R9A	559
chr11:111541865-111542384	520	14	7.35E-04	3.93	RefSeq	TEX12	-921
chr1:150902491-150903021	531	11	7.35E-04	3.93	RefSeq	LCE2D	0
chr17:33706859-33707285	427	13	7.43E-04	3.93	RefSeq	MRPL45	351
chr21:41800567-41801073	507	14	7.51E-04	3.93	RefSeq	TMPRSS2	790
chr6:64088492-64089063	572	16	7.51E-04	3.93	RefSeq	LGSN	-650
chr10:105100633-105101148	516	14	7.51E-04	3.93	RefSeq	PCGF6	0
chrX:72138062-72138616	555	16	7.59E-04	3.92	RefSeq	PABPC1L2B	-1461
chr6:71722097-71722594	498	14	7.59E-04	3.92	RefSeq	B3GAT2	916
chr1:155051809-155052299	491	14	7.59E-04	3.92	RefSeq	NTRK1	0
chr3:25681149-25681694	546	15	7.59E-04	3.92	RefSeq	TOP2B	-281



chr1:85818864-85819351	488	14	7.59E-04	3.92	RefSeq	CYR61	0
chr10:72214983-72215475	493	14	7.59E-04	3.92	RefSeq	TBATA	0
chr17:24643832-24644348	517	12	7.59E-04	3.92	RefSeq	NUFIP2	945
chr14:70442167-70442674	508	12	7.67E-04	3.91	RefSeq	PCNX	-1201
chr4:113287630-113288161	532	15	7.67E-04	3.91	RefSeq	C4orf32	1628
chr19:41121027-41121583	557	16	7.67E-04	3.91	RefSeq	LRFN3	1165
chr20:58062925-58063398	474	12	7.67E-04	3.91	RefSeq	C20orf197	-977
chr11:55318455-55318995	541	15	7.84E-04	3.91	RefSeq	OR5D14	-613
chr14:49135747-49136142	396	11	8.00E-04	3.91	RefSeq	LRR1	582
chr4:87734175-87734842	668	19	8.08E-04	3.91	RefSeq	PTPN13	0
chr2:165185615-165186132	518	15	8.16E-04	3.91	RefSeq	GRB14	475
chr3:129777902-129778416	515	11	8.16E-04	3.91	ncRNA	C3orf27	-282
chr12:62347189-62347698	510	15	8.16E-04	3.9	RefSeq	DPY19L2	924
chr11:61006128-61006636	509	15	8.16E-04	3.9	RefSeq	PPP1R32	967
chrX:6156368-6156933	566	16	8.16E-04	3.9	RefSeq	NLGN4X	0
chr18:69964365-69964904	540	15	8.16E-04	3.9	RefSeq	FBXO15	1177
chr22:34965592-34966081	490	11	8.32E-04	3.9	RefSeq	APOL2	0
chr19:47073610-47074115	506	13	8.32E-04	3.9	RefSeq	CD79A	580
chr6:75970437-75970923	487	14	8.32E-04	3.9	RefSeq	COL12A1	1421
chr17:38185408-38185898	491	14	8.32E-04	3.89	RefSeq	WNK4	-277
chr1:234371274-234371814	541	15	8.40E-04	3.89	RefSeq	GPR137B	-641
chr1:145481293-145481821	529	15	8.40E-04	3.89	RefSeq	BCL9	1398
chr19:7651476-7651964	489	13	8.56E-04	3.89	RefSeq	TRAPPC5	0
chr19:2187563-2188105	543	16	8.56E-04	3.89	RefSeq	PLEKHJ1	-210
chr15:42616163-42616670	508	13	8.56E-04	3.89	RefSeq	EIF3J	0
chr4:9392797-9393296	500	14	8.56E-04	3.89	RefSeq	DRD5	441
chr2:174820613-174821130	518	14	8.64E-04	3.89	RefSeq	OLA1	482
chr6:31789251-31789731	481	13	8.64E-04	3.89	RefSeq	LY6G6D	-1381
chr12:7234299-7234800	502	13	8.64E-04	3.89	RefSeq	PEX5	74
chr12:94709025-94709534	510	15	8.64E-04	3.88	RefSeq	NTN4	-357
chr22:22529542-22530313	772	21	8.64E-04	3.88	RefSeq	SLC2A11	652
chr11:111604028-111604635	608	17	8.64E-04	3.88	RefSeq	PTS	1730
chr22:36533025-36533570	546	14	8.64E-04	3.88	RefSeq	GCAT	-288
chr2:160277672-160278187	516	14	8.64E-04	3.88	RefSeq	MARCH7	458
chr16:29738772-29739280	509	14	8.64E-04	3.88	RefSeq	MVP	0
chr11:9067379-9067858	480	13	8.64E-04	3.88	RefSeq	SCUBE2	1869
chr1:205105202-205105695	494	14	8.64E-04	3.88	RefSeq	IL20	-82
chr1:176330522-176331016	495	14	8.64E-04	3.88	RefSeq	RASAL2	1035
chr2:232497302-232497790	489	14	8.64E-04	3.88	RefSeq	NPPC	1493

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.



chr1:6502137-6502737	601	17	8.64E-04	3.88	RefSeq	PLEKHG5	0
chr15:64370982-64371463	482	14	8.64E-04	3.88	RefSeq	DIS3L	-1224
chr5:149771301-149771681	381	10	8.89E-04	3.87	RefSeq	CD74	1012
chr5:38630890-38631376	487	14	8.89E-04	3.87	RefSeq	LIFR	0
chr7:142885066-142885588	523	15	8.89E-04	3.87	RefSeq	TAS2R41	0
chr18:3438403-3438903	501	14	8.89E-04	3.87	RefSeq	TGIF1	-508
chr7:21549101-21549833	733	20	8.89E-04	3.87	RefSeq	DNAH11	0
chr11:386148-386650	503	15	8.97E-04	3.87	RefSeq	PKP3	1931
chr3:110153051-110153570	520	15	8.97E-04	3.87	RefSeq	GUCA1C	1798
chr13:43908340-43908843	504	14	8.97E-04	3.87	RefSeq	TSC22D1	548
chr11:6999867-7000520	654	15	8.97E-04	3.87	RefSeq	NLRP14	1591
chr1:151280226-151280732	507	14	8.97E-04	3.87	RefSeq	SPRR2D	-7
chr1:2312574-2313069	496	14	8.97E-04	3.87	RefSeq	MORN1	0
chr2:96873743-96874241	499	15	8.97E-04	3.86	RefSeq	ANKRD23	-257
chr12:50912549-50913051	503	14	8.97E-04	3.86	RefSeq	KRT7	-170
chr8:31616162-31616651	490	14	8.97E-04	3.86	RefSeq	NRG1	-159
chr7:96471707-96472271	565	16	8.97E-04	3.86	RefSeq	DLX6	-955
chr5:108112094-108112696	603	16	8.97E-04	3.86	RefSeq	FER	672
chr2:108432367-108432901	535	15	8.97E-04	3.86	RefSeq	GCC2	358
chr18:2836389-2836874	486	14	8.97E-04	3.86	RefSeq	EMILIN2	-154
chr15:19335082-19335586	505	15	8.97E-04	3.86	RefSeq	POTEB2	748
chrX:148428203-148428711	509	15	8.97E-04	3.86	ncRNA	LINC00893	493
chr2:229843261-229843754	494	13	8.97E-04	3.86	RefSeq	PID1	548
chr17:36646583-36647133	551	16	8.97E-04	3.86	RefSeq	KRTAP9-8	-663
chr19:54670343-54670844	502	14	9.05E-04	3.85	RefSeq	FLT3LG	1065
chr20:35589429-35589919	491	12	9.05E-04	3.85	RefSeq	BLCAP	0
chr12:11231693-11232179	487	14	9.05E-04	3.85	RefSeq	TAS2R42	-882
chr1:43596750-43597242	493	13	9.05E-04	3.85	RefSeq	CDC20	0
chr17:77584054-77584529	476	13	9.05E-04	3.85	RefSeq	RAC3	1233
chr1:103840890-103841396	507	14	9.05E-04	3.85	RefSeq	LOC101928436	-196
chr13:44936801-44937297	497	13	9.05E-04	3.84	RefSeq	COG3	0
chr7:93470065-93470583	519	15	9.21E-04	3.84	RefSeq	BET1	1044
chr11:93772509-93773024	516	15	9.37E-04	3.84	RefSeq	GPR83	1210
chr15:86981971-86982460	490	13	9.45E-04	3.83	RefSeq	ISG20	-583
chr10:62429733-62430216	484	14	9.53E-04	3.83	ncRNA	RHOBTB1	527
chr5:170746738-170747255	518	15	9.53E-04	3.83	RefSeq	NPM1	-58
chr5:94442050-94442544	495	14	9.53E-04	3.83	RefSeq	MCTP1	783
chr6:31656497-31657033	537	15	9.53E-04	3.83	RefSeq	LTB	1149
chr4:71098131-71098647	517	14	9.53E-04	3.83	RefSeq	ODAM	1298

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

chr6:53765913-53766417	505	14	9.53E-04	3.83	RefSeq	LRRC1	-1320
chr2:207511513-207511998	486	14	9.53E-04	3.83	RefSeq	CPO	-525
chr6:105958161-105958652	492	14	9.53E-04	3.83	RefSeq	PREP	-468
chr14:60022360-60022844	485	14	9.53E-04	3.83	RefSeq	C14orf39	0
chr20:56157836-56158413	578	16	9.53E-04	3.82	RefSeq	C20orf85	-976
chr10:22674496-22674996	501	14	9.53E-04	3.82	RefSeq	SPAG6	116
chr6:42123700-42124281	582	17	9.53E-04	3.82	RefSeq	CCND3	330
chrX:101281865-101282379	515	15	9.61E-04	3.82	RefSeq	TCEAL6	1666
chr16:18479726-18480239	514	14	9.61E-04	3.82	RefSeq	NOMO2	697
chr12:55130284-55130800	517	15	9.61E-04	3.82	RefSeq	TIMELESS	-816
chr21:42793705-42794222	518	15	9.61E-04	3.82	RefSeq	SLC37A1	894
chr10:16601835-16602498	664	16	9.61E-04	3.82	RefSeq	C1QL3	1513
chr18:32022968-32023475	508	14	9.69E-04	3.82	RefSeq	MOCOS	1490
chrX:119576711-119577211	501	14	9.77E-04	3.81	RefSeq	CUL4B	1635
chr7:44051506-44052006	501	14	9.77E-04	3.81	RefSeq	DBNL	742
chr21:42606451-42606959	509	14	9.77E-04	3.81	RefSeq	TFF3	1817
chr11:102217478-102217980	503	14	9.77E-04	3.81	RefSeq	MMP3	1573
chr1:159120147-159120652	506	14	9.77E-04	3.81	RefSeq	ITLN1	933
chr5:122400470-122400955	486	13	9.77E-04	3.81	RefSeq	PPIC	-145
chr5:112099479-112099966	488	14	9.77E-04	3.81	RefSeq	APC	-1489
chr22:29694641-29695222	582	15	9.77E-04	3.81	RefSeq	MORC2	-453
chr6:35419497-35419997	501	14	9.86E-04	3.81	RefSeq	PPARD	1184
chr3:68122407-68122910	504	15	9.94E-04	3.81	RefSeq	FAM19A1	-514
chr2:105727200-105727590	391	11	9.94E-04	3.81	RefSeq	NCK2	-362
chr21:37300697-37301276	580	16	8.08E-06	5.09	RefSeq	RIPPLY3	0
chr6:71722993-71723557	565	16	9.69E-05	4.55	RefSeq	B3GAT2	0
chr14:102869868-102870386	519	14	1.29E-04	4.45	RefSeq	EIF5	0
chr16:74870627-74871319	693	20	1.53E-04	4.37	RefSeq	CNTNAP4	1950
chr12:56114873-56115364	492	14	2.26E-04	4.28	RefSeq	INHBC	138
chr8:81246883-81247370	488	13	3.15E-04	4.2	RefSeq	TPD52	-433
chr6:636823-637484	662	18	3.64E-04	4.17	RefSeq	EXOC2	658
chr9:98840712-98841254	543	14	3.72E-04	4.15	RefSeq	CTSV	493
chr10:126423956-126424485	530	15	4.12E-04	4.1	RefSeq	FAM53B	-1035
chr10:103805159-103806013	855	24	4.12E-04	4.09	RefSeq	C10orf76	0
chr15:20265205-20265716	512	15	4.77E-04	4.05	ncRNA	GOLGA8DP	1377
chr19:5792072-5792581	510	15	4.93E-04	4.04	RefSeq	FUT6	-1329
chr10:22672333-22672958	626	18	5.09E-04	4.03	RefSeq	SPAG6	-1422
chr1:143708821-143709307	487	14	5.33E-04	4.01	RefSeq	PDE4DIP	-352
chr1:115012116-115012649	534	15	5.49E-04	4	RefSeq	DENND2C	1607

chr3:15444359-15444853	495	13	6.38E-04	3.97	RefSeq	METTL6	-300
chr2:111206459-111206971	513	12	6.54E-04	3.95	RefSeq	ACOXL	0
chr20:62264386-62264946	561	16	6.95E-04	3.95	RefSeq	MYT1	-1325
chr4:141294037-141294528	492	12	7.51E-04	3.93	RefSeq	MAML3	156
chr2:72996185-72996699	515	14	8.16E-04	3.9	RefSeq	EMX1	-1413
chr7:93041425-93041968	544	16	8.72E-04	3.88	RefSeq	CALCR	11
chr10:111961946-111962291	346	10	9.45E-04	3.83	RefSeq	MXI1	1967
chr2:218791684-218792290	607	18	9.53E-04	3.83	RefSeq	ARPC2	1319
chr4:8965343-8966539	1197	32	8.08E-06	-8.25	RefSeq	USP17L25	881
chr4:8955853-8957049	1197	32	8.08E-06	-8.06	RefSeq	USP17L25	881
chr4:8960200-8961794	1595	43	8.08E-06	-7.65	RefSeq	USP17L25	483
chr4:8974870-8976030	1161	31	8.08E-06	-7.48	RefSeq	USP17L25	917
chr4:8970088-8971284	1197	32	8.08E-06	-6.32	RefSeq	USP17L10	881
chr7:99744290-99744954	665	19	8.08E-06	-6.18	RefSeq	SPDYE3	1029
chr8:7178278-7179293	1016	26	8.08E-06	-6.13	RefSeq	USP17L1	959
chr1:93316250-93316886	637	18	8.08E-06	-6.06	RefSeq	MTF2	-494
chr16:14751309-14751795	487	14	8.08E-06	-5.5	RefSeq	NPIPA3	-376
chr10:45411212-45411849	638	18	8.08E-06	-5.45	RefSeq	MARCH8	-851
chr15:48846611-48847254	644	19	8.08E-06	-5.44	RefSeq	SPPL2A	-1408
chr16:2529373-2530011	639	18	8.08E-06	-5.42	RefSeq	PDPK1	1407
chr20:25728433-25729326	894	22	8.08E-06	-5.3	ncRNA	FAM182B	602
chr9:44942433-44943477	1045	25	8.08E-06	-5.23	ncRNA	LOC102723709	1810
chr16:14937943-14938425	483	14	8.08E-06	-5.22	RefSeq	NPIPA1	-376
chr12:119036609-119037389	781	22	8.08E-06	-5.17	RefSeq	RAB35	1638
chr2:67479271-67480097	827	24	8.08E-06	-5.17	RefSeq	ETAA1	1325
chr5:52893848-52894499	652	18	8.08E-06	-5.13	RefSeq	NDUFS4	1626
chr17:3994012-3994804	793	20	8.08E-06	-5.12	RefSeq	CYB5D2	348
chr2:112957662-112958271	610	18	8.08E-06	-5.11	RefSeq	TTL	1448
chr11:4571383-4572309	927	26	8.08E-06	-5.08	RefSeq	OR52I1	0
chr1:29427712-29428275	564	16	8.08E-06	-5.08	RefSeq	MECR	1783
chr16:70305676-70306366	691	19	8.08E-06	-5.05	RefSeq	PHLPP2	879
chr19:8951795-8952424	630	18	8.08E-06	-5.04	RefSeq	MUC16	595
chr16:29368415-29368963	549	15	8.08E-06	-5.01	ncRNA	LOC606724	248
chr8:7871010-7871637	628	16	1.62E-05	-4.95	RefSeq	USP17L3	1281
chr17:36792212-36792764	553	16	2.42E-05	-4.86	RefSeq	KRT34	-49
chr8:92151917-92152588	672	19	3.23E-05	-4.76	RefSeq	OTUD6B	317
chr3:64649742-64650549	808	20	3.23E-05	-4.75	RefSeq	ADAMTS9	-1336
chrX:152516355-152516757	403	12	4.85E-05	-4.67	RefSeq	FAM58A	1070
chr1:27574429-27574860	432	12	4.85E-05	-4.66	RefSeq	FCN3	-526

chr5:40871178-40871754	577	15	4.85E-05	-4.64	RefSeq	RPL37	-33
chr5_h2_hap1:1006229-1006797	569	17	5.65E-05	-4.63	RefSeq	GTF2H2C_2	-936
chr16:15380013-15380485	473	14	5.65E-05	-4.62	RefSeq	NPIPA5	-360
chr22:49334801-49335387	587	16	5.65E-05	-4.61	RefSeq	KLHDC7B	1473
chrX:119903990-119904472	483	14	5.65E-05	-4.57	RefSeq	CT47A10	-435
chr19:46952491-46953026	536	16	5.65E-05	-4.57	RefSeq	CEACAM6	1223
chr10:7783971-7784425	455	14	6.46E-05	-4.56	RefSeq	ITIH2	-817
chr16:3871392-3871948	557	16	6.46E-05	-4.56	RefSeq	CREBBP	-1269
chr7:44008532-44009145	614	17	6.46E-05	-4.56	RefSeq	SPDYE1	1518
chr5:56147540-56148357	818	21	8.08E-05	-4.52	RefSeq	MAP3K1	883
chr10:76539876-76540427	552	16	8.89E-05	-4.5	RefSeq	DUSP13	-899
chr11:67109561-67110281	721	19	8.89E-05	-4.5	RefSeq	GSTP1	1919
chr2:51113197-51113869	673	19	8.89E-05	-4.5	RefSeq	NRXN1	-18
chr19:2232043-2232934	892	25	8.89E-05	-4.48	RefSeq	C19orf35	248
chr3:154364367-154364940	574	15	8.89E-05	-4.47	RefSeq	RAP2B	1676
chr19:46635988-46636823	836	19	8.89E-05	-4.46	RefSeq	ATP5SL	499
chr3:47597637-47598207	571	16	8.89E-05	-4.45	RefSeq	CSPG5	-902
chr1:166150157-166150783	627	18	9.69E-05	-4.42	RefSeq	ADCY10	-68
chr16:87751547-87752765	1219	35	9.69E-05	-4.42	ncRNA	LINC00304	-364
chr19:54707350-54707824	475	14	9.69E-05	-4.41	RefSeq	FCGRT	2
chr11:123314848-123316000	1153	31	9.69E-05	-4.41	RefSeq	OR4D5	0
chrX:118582497-118583065	569	16	1.05E-04	-4.41	RefSeq	CXorf56	336
chr7:47984028-47984519	492	14	1.13E-04	-4.38	RefSeq	HUS1	1229
chr17:70912220-70912828	609	18	1.13E-04	-4.38	RefSeq	GRB2	557
chr2:118560844-118561362	519	15	1.13E-04	-4.36	RefSeq	INSIG2	-1158
chr3:49288273-49288805	533	15	1.13E-04	-4.36	RefSeq	C3orf62	708
chr19:9296370-9296810	441	13	1.13E-04	-4.36	RefSeq	ZNF559-ZNF177	468
chr17:37275062-37275600	539	11	1.29E-04	-4.35	RefSeq	KLHL11	0
chr3:185498339-185498882	544	11	1.29E-04	-4.35	RefSeq	PSMD2	-698
chr2:102340408-102340929	522	15	1.29E-04	-4.35	RefSeq	IL18R1	1233
chr13:40393475-40394212	738	21	1.29E-04	-4.35	ncRNA	SUGT1P3	0
chr11:117982740-117983443	704	19	1.29E-04	-4.35	RefSeq	PHLDB1	-73
chr1:222370282-222370782	501	14	1.29E-04	-4.34	RefSeq	FBXO28	1870
chr12:105163796-105164336	541	13	1.29E-04	-4.34	RefSeq	CKAP4	1508
chr1:240076337-240076864	528	15	1.29E-04	-4.33	RefSeq	EXO1	-1252
chr14:104360257-104360804	548	11	1.29E-04	-4.32	ncRNA	LINC00638	1674
chrX:103386593-103387528	936	24	1.37E-04	-4.32	RefSeq	ESX1	-337
chr1:58784281-58784719	439	13	1.37E-04	-4.31	RefSeq	OMA1	316
chr1:53302141-53302910	770	15	1.37E-04	-4.31	RefSeq	PODN	1829





chr3:47817869-47818406	538	16	1.53E-04	-4.29	RefSeq	DHX30	-997
chr7:74861271-74861810	540	16	1.70E-04	-4.28	RefSeq	TRIM73	-1029
chr2:27201531-27201974	444	13	1.78E-04	-4.27	RefSeq	ABHD1	1370
chr1:1836018-1836621	604	17	1.78E-04	-4.27	RefSeq	CALML6	0
chr8:107849507-107849882	376	11	1.78E-04	-4.26	RefSeq	ABRA	1767
chrX:1533041-1533641	601	17	1.86E-04	-4.26	RefSeq	ASMTL	-385
chr2:27445826-27446483	658	18	1.86E-04	-4.25	RefSeq	EIF2B4	346
chr8:82558365-82558987	623	18	1.86E-04	-4.25	RefSeq	FABP4	-336
chr8:67945885-67946413	529	15	1.86E-04	-4.25	RefSeq	MCMDC2	0
chr17:73390667-73391429	763	19	1.86E-04	-4.24	ncRNA	FLJ45079	336
chr20:51634449-51635026	578	17	1.86E-04	-4.24	RefSeq	ZNF217	-1405
chr5:68890263-68890876	614	17	1.86E-04	-4.23	RefSeq	GTF2H2C_2	-954
chr5:154073913-154074496	584	13	1.86E-04	-4.22	RefSeq	LARP1	1258
chr19:60075550-60075948	399	12	1.86E-04	-4.22	RefSeq	FCAR	-1413
chr5:41940790-41941175	386	11	1.86E-04	-4.21	RefSeq	C5orf51	563
chrX:119896725-119897439	715	21	1.86E-04	-4.21	RefSeq	CT47A10	1255
chr15:28161818-28162366	549	15	1.94E-04	-4.21	RefSeq	GOLGA8J	-84
chr20:30812448-30813180	733	20	1.94E-04	-4.21	RefSeq	DNMT3B	-672
chr3:75797511-75798089	579	16	1.94E-04	-4.21	RefSeq	FRG2C	1334
chr11:65139116-65139881	766	23	1.94E-04	-4.2	RefSeq	MAP3K11	-819
chrX:119178110-119178587	478	14	1.94E-04	-4.2	RefSeq	RHOXF2B	1615
chr16:2421001-2421383	383	11	1.94E-04	-4.19	RefSeq	CCNF	1605
chr2:119321872-119322463	592	16	2.02E-04	-4.18	RefSeq	EN1	0
chr1:173304729-173305259	531	15	2.02E-04	-4.18	RefSeq	TNN	1112
chr1:148867678-148868327	650	17	2.02E-04	-4.17	RefSeq	ENSA	396
chr8:124851702-124852237	536	16	2.02E-04	-4.17	RefSeq	FAM91A1	1639
chr7:38635936-38636513	578	17	2.02E-04	-4.17	RefSeq	AMPH	1180
chr7:74963856-74964367	512	14	2.02E-04	-4.16	RefSeq	SPDYE5	1621
chr19:38156628-38157232	605	17	2.02E-04	-4.15	RefSeq	C19orf40	1665
chrX:77041692-77042221	530	15	2.02E-04	-4.15	RefSeq	COX7B	75
chr22:29198028-29198737	710	20	2.02E-04	-4.15	RefSeq	SEC14L3	0
chr11:57067449-57068126	678	19	2.10E-04	-4.14	RefSeq	SMTNL1	759
chr22:21316395-21317256	862	24	2.10E-04	-4.14	RefSeq	GGTLC2	0
chr14:22356907-22357573	667	18	2.10E-04	-4.13	RefSeq	SLC7A7	1288
chr15:99610732-99611269	538	15	2.10E-04	-4.12	RefSeq	CHSY1	-1071
chr1:202001527-202001917	391	11	2.18E-04	-4.12	RefSeq	LAX1	620
chr5:115935957-115936612	656	19	2.18E-04	-4.12	RefSeq	SEMA6A	1910
chrX:99963750-99964202	453	13	2.26E-04	-4.12	RefSeq	CSTF2	1746
chr6:26548825-26549211	387	10	2.26E-04	-4.11	RefSeq	BTN3A3	146

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

chr4:148825396-148825783	388	11	2.26E-04	-4.11	RefSeq	PRMT9	-665
chr10:75071542-75071913	372	11	2.26E-04	-4.11	RefSeq	MYOZ1	-20
chr3:173044245-173044891	647	17	2.26E-04	-4.11	RefSeq	TMEM212	412
chr19:12110288-12110877	590	13	2.26E-04	-4.1	RefSeq	ZNF20	1346
chrX:22202473-22202988	516	15	2.26E-04	-4.1	RefSeq	ZNF645	1522
chr4:88941279-88941793	515	13	2.26E-04	-4.1	RefSeq	IBSP	1553
chr11:4585566-4586084	519	14	2.26E-04	-4.1	RefSeq	TRIM68	0
chr7:158313894-158314777	884	25	2.26E-04	-4.09	RefSeq	ESYT2	304
chr6:116705830-116706397	568	16	2.26E-04	-4.09	RefSeq	TSPYL1	1577
chr9:74755727-74756350	624	18	2.26E-04	-4.09	RefSeq	ALDH1A1	1704
chr7:134322894-134323872	979	27	2.26E-04	-4.09	RefSeq	AGBL3	1095
chr4:8977884-8978870	987	25	2.26E-04	-4.08	ncRNA	USP17L6P	0
chr10:116570566-116571087	522	14	2.26E-04	-4.08	RefSeq	FAM160B1	-406
chr10:48907342-48907854	513	14	2.26E-04	-4.08	ncRNA	CTGLF12P	1811
chr11:33055459-33056028	570	16	2.26E-04	-4.08	ncRNA	LINC00294	1187
chr10:75125201-75125744	544	15	2.26E-04	-4.08	RefSeq	AGAP5	1817
chr8:22477686-22478261	576	14	2.26E-04	-4.08	RefSeq	SORBS3	-863
chr6:74288363-74288942	580	17	2.34E-04	-4.07	RefSeq	EEF1A1	-886
chr19:61135139-61135652	514	15	2.34E-04	-4.07	RefSeq	NLRP13	0
chr11:47693469-47693912	444	13	2.34E-04	-4.07	RefSeq	AGBL2	0
chrX:106903235-106903782	548	16	2.34E-04	-4.06	RefSeq	TSC22D3	1892
chr3:75346447-75347021	575	16	2.34E-04	-4.06	ncRNA	MIR4444-1	130
chr1:212792314-212792811	498	11	2.34E-04	-4.06	RefSeq	PTPN14	-666
chrX:40477641-40478194	554	16	2.42E-04	-4.05	RefSeq	MED14OS	-1398
chr7:98987094-98987762	669	18	2.50E-04	-4.05	RefSeq	FAM200A	0
chr14:20318025-20318531	507	15	2.50E-04	-4.05	RefSeq	RNASE6	-519
chr10:119125806-119126217	412	12	2.50E-04	-4.05	RefSeq	PDZD8	-878
chr14:30097316-30097884	569	16	2.59E-04	-4.05	RefSeq	G2E3	-196
chr17:35371886-35372608	723	20	2.59E-04	-4.04	RefSeq	GSDMA	-144
chr14:92283607-92284097	491	14	2.59E-04	-4.04	RefSeq	LGMN	704
chr16:74127225-74127593	369	11	2.67E-04	-4.04	RefSeq	CHST5	-655
chrX:119894282-119894748	467	13	2.67E-04	-4.04	RefSeq	CT47B1	-474
chr1:149310878-149311344	467	13	2.67E-04	-4.03	RefSeq	GABPB2	1174
chrX:48929588-48930332	745	21	2.67E-04	-4.03	RefSeq	PRICKLE3	0
chr13:33291323-33291860	538	16	2.67E-04	-4.03	RefSeq	RFC3	1117
chr2:46778352-46779141	790	18	2.67E-04	-4.03	RefSeq	SOCS5	-462
chr15:72828385-72828969	585	14	2.75E-04	-4.02	RefSeq	CYP1A2	148
chr4:37504866-37505409	544	15	2.83E-04	-4.02	RefSeq	PGM2	189
chr2:219789485-219790027	543	15	2.83E-04	-4.02	RefSeq	ABCB6	1930

chr7:115928071-115928733	663	19	2.83E-04	-4.02	RefSeq	CAV2	1180
chr5:149647772-149648536	765	22	2.83E-04	-4.02	RefSeq	CAMK2A	1061
chr11:92704083-92704593	511	15	2.91E-04	-4.02	RefSeq	CCDC67	552
chr19:6687656-6688296	641	17	2.91E-04	-4.01	RefSeq	GPR108	338
chr2:219283873-219284357	485	14	2.91E-04	-4.01	RefSeq	TTLL4	61
chr7:56087502-56087950	449	13	2.99E-04	-4.01	RefSeq	CCT6A	630
chr11:82675144-82675641	498	14	3.07E-04	-4.01	RefSeq	CCDC90B	-45
chr1:39096237-39096661	425	13	3.07E-04	-4	RefSeq	RRAGC	1422
chr4:185809456-185809788	333	10	3.07E-04	-4	RefSeq	PRIMPOL	1695
chr12:118590689-118591113	425	13	3.07E-04	-4	RefSeq	PRKAB1	545
chr17:7550174-7550620	447	13	3.15E-04	-3.99	RefSeq	EFNB3	929
chrX:47851872-47852368	497	14	3.15E-04	-3.99	ncRNA	SSX6	0
chr2:113971301-113971666	366	10	3.39E-04	-3.98	RefSeq	FOXD4L1	-1465
chrX:119623654-119624149	496	13	3.47E-04	-3.97	RefSeq	MCTS1	1074
chr21:42657302-42657812	511	14	3.47E-04	-3.96	RefSeq	TFF1	1902
chr11:114878028-114878532	505	13	3.47E-04	-3.95	RefSeq	CADM1	1920
chr9:5502065-5502562	498	14	3.47E-04	-3.95	RefSeq	PDCD1LG2	1520
chr10:102809274-102809814	541	16	3.47E-04	-3.95	RefSeq	KAZALD1	-1175
chrX:48048361-48048967	607	17	3.47E-04	-3.94	ncRNA	SSX9	1592
chr2:127999309-127999794	486	12	3.47E-04	-3.94	RefSeq	IWS1	764
chr1:16920592-16921142	551	16	3.47E-04	-3.94	ncRNA	ESPNP	-1352
chr5:175325893-175326432	540	11	3.64E-04	-3.93	RefSeq	THOC3	1493
chrX:119942895-119943377	483	14	3.72E-04	-3.93	RefSeq	CT47A10	-435
chr9:71478038-71478581	544	16	3.72E-04	-3.93	RefSeq	APBA1	-942
chr2:27653305-27653811	507	14	3.88E-04	-3.91	RefSeq	C2orf16	412
chrX:125127820-125128323	504	14	3.96E-04	-3.9	RefSeq	DCAF12L2	-58
chr1:119485470-119485996	527	15	3.96E-04	-3.9	RefSeq	WARS2	-651
chr8:86760575-86761063	489	13	4.20E-04	-3.9	ncRNA	REXO1L2P	932
chr22:20069548-20070057	510	14	4.20E-04	-3.89	RefSeq	RIMBP3C	1885
chr6:107456361-107456858	498	11	4.28E-04	-3.89	RefSeq	C6orf203	292
chr8:55095485-55095987	503	13	4.28E-04	-3.89	RefSeq	TCEA1	1583
chr5:78444866-78445383	518	15	4.28E-04	-3.89	RefSeq	BHMT	1506
chr10:35419047-35419540	494	11	4.28E-04	-3.89	RefSeq	CUL2	37
chr12:63083177-63083687	511	10	4.28E-04	-3.89	RefSeq	XPOT	-733
chr22:49412585-49413095	511	14	4.28E-04	-3.89	RefSeq	ARSA	373
chr19:50701216-50701701	486	12	4.36E-04	-3.88	RefSeq	VASP	-827
chr1:12814454-12814785	332	10	4.52E-04	-3.87	RefSeq	PRAMEF11	-602
chr4:144700495-144700914	420	11	4.52E-04	-3.87	ncRNA	GUSBP5	420
chr3:140150665-140151290	626	17	4.60E-04	-3.87	RefSeq	FOXL2NB	1899

chr10:69900134-69900676	543	11	4.60E-04	-3.86	RefSeq	DNA2	1061
chr4:148873170-148873670	501	14	4.69E-04	-3.86	RefSeq	ARHGAP10	267
chr11:49011405-49011909	505	12	4.69E-04	-3.85	RefSeq	TRIM49B	1677
chrX:71850026-71850595	570	15	4.69E-04	-3.85	RefSeq	PHKA1	160
chr19:1124155-1124683	529	14	4.69E-04	-3.85	RefSeq	SBNO2	600
chr15:76005489-76005983	495	14	4.69E-04	-3.85	ncRNA	LOC645752	261
chr8:22282300-22282816	517	15	4.69E-04	-3.85	RefSeq	SLC39A14	1593
chr19:17817926-17818369	444	14	4.69E-04	-3.84	RefSeq	JAK3	1473
chr19:58355196-58355745	550	15	4.69E-04	-3.84	RefSeq	ZNF347	-1070
chr6:158163717-158164236	520	11	4.77E-04	-3.84	RefSeq	SNX9	0
chr11:123686243-123686750	508	14	4.93E-04	-3.83	RefSeq	OR8D1	-370
chr14:22467061-22467631	571	17	4.93E-04	-3.83	RefSeq	PRMT5	1004
chr6:26493279-26493726	448	13	5.09E-04	-3.82	RefSeq	BTN2A2	1861
chrX:99785709-99786215	507	12	5.09E-04	-3.82	RefSeq	SRPX2	0
chr10:43606536-43607042	507	14	5.17E-04	-3.82	ncRNA	HNRNPA3P1	-664
chr17:36191496-36192008	513	14	5.25E-04	-3.81	RefSeq	KRT27	305
chr3:151963259-151963821	563	16	5.25E-04	-3.81	RefSeq	SIAH2	133
chr6:41997555-41998041	487	14	5.25E-04	-3.81	RefSeq	BYSL	612
chr3:49441181-49441701	521	15	5.33E-04	-3.81	RefSeq	NICN1	61
chr14:73073152-73073641	490	10	5.33E-04	-3.81	RefSeq	ACOT1	-40
chr9:4479312-4479821	510	15	5.33E-04	-3.8	RefSeq	SLC1A1	-606
chr19:11512308-11512895	588	16	5.33E-04	-3.8	RefSeq	CNN1	1729
chr9:94096772-94097267	496	14	5.33E-04	-3.8	RefSeq	IARS	-912
chr4:166173140-166173480	341	10	5.33E-04	-3.8	RefSeq	TRIM60	539
chr18:62423576-62424066	491	14	5.33E-04	-3.8	RefSeq	CDH19	-1220
chr10:15249733-15250315	583	15	5.41E-04	-3.79	RefSeq	NMT2	387
chr3:194755007-194755550	544	14	5.41E-04	-3.79	RefSeq	ATP13A4	0
chr19:63175394-63175947	554	16	5.41E-04	-3.79	RefSeq	C19orf18	1768
chr7:99411965-99412379	415	11	5.41E-04	-3.79	RefSeq	AZGP1	-293
chr1:161028937-161029421	485	14	5.41E-04	-3.79	RefSeq	HSD17B7	1817
chr4:145785391-145786012	622	17	5.41E-04	-3.79	RefSeq	HHIP	-586
chr3:120879261-120879681	421	12	5.49E-04	-3.78	RefSeq	COX17	-327
chr6:30648546-30649064	519	15	5.49E-04	-3.78	RefSeq	ABCF1	1397
chr8:124817785-124818243	459	13	5.57E-04	-3.78	RefSeq	ANXA13	586
chr16:33114091-33114658	568	30	5.57E-04	-3.78	RefSeq	TP53TG3B	1007
chrX:119938115-119938517	403	12	5.57E-04	-3.78	RefSeq	CT47A10	-515
chr1:245988345-245988882	538	15	5.57E-04	-3.78	RefSeq	OR1C1	-13
chr13:45324473-45325023	551	15	5.57E-04	-3.78	RefSeq	SIAH3	-625
chr8:119190751-119191292	542	14	5.57E-04	-3.77	RefSeq	EXT1	1948

chrX:114157975-114158494	520	15	5.57E-04	-3.77	RefSeq	IL13RA2	0
chr19:57242852-57243370	519	13	5.65E-04	-3.77	RefSeq	ZNF432	516
chr19:56652263-56652757	495	13	5.65E-04	-3.77	RefSeq	SIGLEC8	764
chr9:33666114-33666788	675	19	5.74E-04	-3.76	ncRNA	PTENP1	631
chr15:86964229-86964618	390	11	5.90E-04	-3.75	RefSeq	AEN	-913
chr10:47212222-47212709	488	13	5.98E-04	-3.75	ncRNA	FAM25BP	1912
chr1:119757203-119757582	380	11	5.98E-04	-3.75	RefSeq	HSD3B2	-1495
chr21:45699363-45699945	583	17	5.98E-04	-3.75	RefSeq	COL18A1	0
chr2:6041398-6041892	495	14	5.98E-04	-3.75	ncRNA	LOC400940	1837
chr16:55218406-55218834	429	12	5.98E-04	-3.75	RefSeq	MT1E	1320
chr14:19459085-19459603	519	15	6.14E-04	-3.74	RefSeq	OR4K5	479
chr1:35796754-35797154	401	12	6.14E-04	-3.74	RefSeq	NCDN	774
chr17:70768144-70768657	514	15	6.22E-04	-3.74	RefSeq	GGA3	1413
chr7:107088580-107089169	590	17	6.30E-04	-3.73	RefSeq	SLC26A4	264
chr6:44419869-44420401	533	15	6.30E-04	-3.73	RefSeq	SPATS1	1494
chrX:48214791-48215238	448	13	6.30E-04	-3.73	RefSeq	SLC38A5	-1202
chr8:12031707-12032401	695	17	6.30E-04	-3.73	RefSeq	USP17L2	1278
chr12:42436890-42437229	340	10	6.30E-04	-3.73	RefSeq	PUS7L	1615
chr15:39311282-39311682	401	12	6.38E-04	-3.73	RefSeq	EXD1	-1034
chr4:5071806-5072303	498	14	6.38E-04	-3.72	RefSeq	CYTL1	0
chr11:17255652-17256169	518	14	6.46E-04	-3.72	RefSeq	NUCB2	790
chr10:126420857-126421408	552	15	6.54E-04	-3.72	RefSeq	FAM53B	1513
chr8:120290457-120290953	497	14	6.54E-04	-3.72	RefSeq	MAL2	666
chr6:49787877-49788377	501	15	6.54E-04	-3.72	RefSeq	CRISP2	886
chr14:22522378-22522735	358	10	6.54E-04	-3.72	RefSeq	AJUBA	-686
chr11:33846365-33846902	538	15	6.54E-04	-3.71	RefSeq	LMO2	1184
chrX:55531277-55531650	374	11	6.62E-04	-3.71	RefSeq	USP51	707
chr6:26038319-26038821	503	14	6.70E-04	-3.71	RefSeq	SLC17A2	113
chr10:15171932-15172672	741	21	6.79E-04	-3.71	RefSeq	ACBD7	-1150
chr1:242582995-242583550	556	12	6.79E-04	-3.7	RefSeq	C1orf100	435
chr3:180270514-180271086	573	16	6.79E-04	-3.7	RefSeq	ZMAT3	1265
chr19:9982912-9983263	352	11	6.79E-04	-3.7	RefSeq	COL5A3	-764
chr4:280119-280672	554	12	6.79E-04	-3.7	RefSeq	ZNF732	-174
chr5:95184141-95184657	517	15	6.79E-04	-3.7	RefSeq	GLRX	0
chr10:13667262-13667718	457	13	6.79E-04	-3.7	RefSeq	PRPF18	-1227
chr9:42999421-43000119	699	18	6.79E-04	-3.7	ncRNA	GXYLT1P3	-1027
chr2:25118880-25119387	508	14	6.79E-04	-3.7	RefSeq	EFR3B	403
chr11:5233896-5234337	442	10	7.11E-04	-3.69	RefSeq	HBG2	-1308
chr11:64404713-64405192	480	13	7.19E-04	-3.69	RefSeq	EHD1	-951

chr20:56990897-56991482	586	12	7.27E-04	-3.69	RefSeq	NELFCD	1239
chr1:150148607-150149123	517	14	7.27E-04	-3.69	RefSeq	THEM4	0
chr2:207015852-207016356	505	14	7.35E-04	-3.68	RefSeq	ADAM23	-257
chr16:27123898-27124335	438	13	7.35E-04	-3.68	RefSeq	KDM8	1101
chr3:47528255-47528719	465	11	7.35E-04	-3.68	RefSeq	ELP6	1485
chr16:55777631-55778134	504	13	7.35E-04	-3.68	RefSeq	FAM192A	-153
chr15:79451879-79452587	709	19	7.35E-04	-3.68	RefSeq	TMC3	887
chr2:37045791-37046306	516	14	7.35E-04	-3.68	RefSeq	STRN	814
chr15:32616255-32616781	527	14	7.43E-04	-3.68	RefSeq	GOLGA8B	-740
chr18:42955263-42955764	502	14	7.43E-04	-3.68	RefSeq	IER3IP1	980
chr12:115658333-115658746	414	12	7.43E-04	-3.68	RefSeq	C12orf49	1481
chr7:148358159-148358562	404	12	7.43E-04	-3.68	RefSeq	PDIA4	-1443
chr3:47396205-47396732	528	12	7.43E-04	-3.68	RefSeq	PTPN23	-763
chr6:150111658-150112209	552	15	7.43E-04	-3.67	RefSeq	PCMT1	-315
chr14:75906497-75907009	513	13	7.43E-04	-3.67	RefSeq	ESRRB	-434
chr11:56066740-56067232	493	14	7.43E-04	-3.67	RefSeq	OR5M11	78
chr13:109759608-109760031	424	12	7.43E-04	-3.67	RefSeq	COL4A2	1976
chr1:110253236-110253958	723	21	7.43E-04	-3.67	RefSeq	CSF1	-798
chrX:100525325-100525879	555	16	7.51E-04	-3.67	RefSeq	BTK	1990
chr1:154665923-154666426	504	14	7.51E-04	-3.67	RefSeq	C1orf61	-114
chr11:117717500-117717999	500	12	7.51E-04	-3.67	RefSeq	CD3D	671
chr9:34600552-34601058	507	14	7.51E-04	-3.67	RefSeq	RPP25L	1053
chr15:20443098-20443610	513	15	7.51E-04	-3.67	RefSeq	CYFIP1	-480
chrX:70349844-70350300	457	13	7.59E-04	-3.67	RefSeq	GJB1	-1487
chr14:93322513-93322853	341	10	7.59E-04	-3.67	RefSeq	PRIMA1	1667
chr16:561640-562256	617	18	7.59E-04	-3.67	RefSeq	PIGQ	1671
chr15:63146897-63147405	509	15	7.67E-04	-3.66	RefSeq	RASL12	37
chr6:4947795-4948284	490	15	7.67E-04	-3.66	RefSeq	RPP40	1013
chr10:11691403-11691889	487	14	7.67E-04	-3.66	RefSeq	USP6NL	1906
chr6:134414122-134414608	487	14	7.67E-04	-3.66	RefSeq	SLC2A12	875
chr12:121752621-121753118	498	14	7.84E-04	-3.66	RefSeq	HCAR2	740
chr12:95317905-95318418	514	14	7.84E-04	-3.66	RefSeq	CDK17	80
chr18:42796253-42796745	493	14	7.84E-04	-3.65	RefSeq	TCEB3CL	1625
chr11:64706738-64707233	496	14	7.84E-04	-3.65	RefSeq	CAPN1	1476
chr3:15442980-15443521	542	15	8.00E-04	-3.65	RefSeq	METTL6	538
chr19:9407970-9408441	472	13	8.00E-04	-3.65	RefSeq	ZNF266	-715
chr1:178112486-178113001	516	16	8.00E-04	-3.65	RefSeq	TOR1AIP2	564
chr19:38053847-38054349	503	14	8.00E-04	-3.65	RefSeq	SLC7A9	-1323
chrX:47999303-47999834	532	15	8.00E-04	-3.65	RefSeq	SSX1	0

chr5:70916952-70917591	640	18	8.00E-04	-3.65	RefSeq	MCCC2	-1280
chr7:98763211-98763629	419	12	8.00E-04	-3.65	RefSeq	ARPC1A	1779
chr13:98025073-98025562	490	14	8.00E-04	-3.65	RefSeq	STK24	1845
chr2:64287156-64287642	487	14	8.00E-04	-3.65	ncRNA	LINC00309	-1032
chr1:16175557-16176073	517	14	8.00E-04	-3.64	RefSeq	ZBTB17	-342
chr22:29051599-29052115	517	15	8.16E-04	-3.64	RefSeq	TBC1D10A	841
chr11:133276463-133276878	416	12	8.24E-04	-3.64	ncRNA	MIR4697HG	0
chr14:23490761-23491255	495	15	8.24E-04	-3.64	ncRNA	DHRS4-AS1	1992
chr8:30132372-30132889	518	15	8.24E-04	-3.64	RefSeq	DCTN6	-466
chr22:21558584-21558928	345	10	8.32E-04	-3.63	RefSeq	IGLL5	-1032
chr16:84388779-84389190	412	12	8.32E-04	-3.63	RefSeq	EMC8	1460
chr8:145692927-145693462	536	15	8.40E-04	-3.63	RefSeq	PPP1R16A	10
chrX:100193722-100194255	534	15	8.40E-04	-3.63	RefSeq	TRMT2B	0
chr20:56846479-56847059	581	17	8.48E-04	-3.63	RefSeq	GNAS	-1131
chr2:119842731-119843250	520	15	8.48E-04	-3.63	RefSeq	DBI	1761
chr20:25938341-25938911	571	16	8.64E-04	-3.63	ncRNA	LOC100134868	0
chr20:61759593-61760074	482	14	8.64E-04	-3.63	RefSeq	RTEL1	0
chr16:56787260-56787704	445	13	8.64E-04	-3.63	RefSeq	CSNK2A2	1580
chr5:150926885-150927483	599	17	8.64E-04	-3.63	RefSeq	FAT2	1216
chr17:45911906-45912389	484	14	8.64E-04	-3.63	RefSeq	RSAD1	717
chr5:175989352-175989763	412	12	8.64E-04	-3.62	RefSeq	SNCB	401
chr15:53997271-53997773	503	15	8.64E-04	-3.62	RefSeq	NEDD4	-649
chr2:61987240-61987720	481	14	8.64E-04	-3.62	RefSeq	COMMD1	933
chr2:237988004-237988355	352	11	8.64E-04	-3.62	RefSeq	COL6A3	-414
chr6:112774430-112774916	487	12	8.64E-04	-3.62	RefSeq	RFPL4B	-309
chr18:53406004-53406588	585	13	8.64E-04	-3.62	RefSeq	FECH	-1036
chr19:12524365-12524765	401	11	8.64E-04	-3.62	RefSeq	ZNF564	-1008
chr12:63439820-63440315	496	14	8.72E-04	-3.62	RefSeq	GNS	-326
chr2:219532187-219532640	454	12	8.72E-04	-3.62	RefSeq	CDK5R2	0
chr12:10255424-10255795	372	11	8.72E-04	-3.61	RefSeq	GABARAPL1	-961
chr18:19339323-19339787	465	14	8.72E-04	-3.61	RefSeq	C18orf8	1891
chr5:10300791-10301337	547	16	8.72E-04	-3.61	RefSeq	FAM173B	1685
chr19:9185732-9186291	560	16	8.89E-04	-3.61	RefSeq	OR7D4	257
chr3:101315818-101316347	530	14	8.89E-04	-3.61	RefSeq	FILIP1L	0
chr3:46515986-46516475	490	14	8.89E-04	-3.61	RefSeq	RTP3	1497
chr6:43652929-43653447	519	15	8.97E-04	-3.61	RefSeq	POLH	1073
chr12:119828002-119828538	537	16	8.97E-04	-3.61	RefSeq	SPPL3	-1463
chr16:2978430-2978944	515	15	8.97E-04	-3.61	ncRNA	LINC00514	-112
chr13:77009775-77010226	452	13	8.97E-04	-3.61	RefSeq	SCEL	1965

chr1:154604611-154604928	318	10	8.97E-04	-3.61	RefSeq	RHBG	-676
chr1:109433535-109433971	437	12	9.05E-04	-3.6	RefSeq	TMEM167B	-955
chr2:187265621-187266098	478	12	9.05E-04	-3.6	RefSeq	FAM171B	-936
chr4:81336193-81336828	636	17	9.05E-04	-3.6	RefSeq	PRDM8	-853
chr8:7106531-7107161	631	19	9.05E-04	-3.6	ncRNA	LINC00965	1264
chr21:32165826-32166326	501	14	9.05E-04	-3.6	RefSeq	HUNK	-1173
chr5:60031242-60031742	501	14	9.21E-04	-3.6	RefSeq	DEPDC1B	9
chr16:417375-417801	427	12	9.21E-04	-3.6	RefSeq	RAB11FIP3	1706
chr9:116124638-116125160	523	15	9.21E-04	-3.6	RefSeq	ORM1	0
chr19:40959352-40959845	494	14	9.21E-04	-3.6	RefSeq	ARHGAP33	1095
chr11:5226230-5226743	514	13	9.21E-04	-3.59	RefSeq	HBG1	921
chr17:32925410-32925928	519	15	9.21E-04	-3.59	RefSeq	DUSP14	1346
chr10:64249988-64250476	489	14	9.29E-04	-3.59	RefSeq	EGR2	-1054
chr10:118599272-118599766	495	14	9.29E-04	-3.59	RefSeq	ENO4	259
chr5:77108394-77108781	388	11	9.37E-04	-3.59	RefSeq	TBCA	-452
chr21:45532713-45533185	473	14	9.37E-04	-3.59	RefSeq	POFUT2	-473
chr6_cox_hap1:3946684-3947200	517	12	9.53E-04	-3.59	RefSeq	HLA-DRB1	861
chr17:4967647-4968200	554	12	9.53E-04	-3.59	RefSeq	ZNF232	-525
chr14:101091395-101091775	381	12	9.61E-04	-3.59	ncRNA	DIO3OS	0
chr2:108970359-108970871	513	15	9.61E-04	-3.59	RefSeq	EDAR	1390
chr21:34474865-34475364	500	14	9.61E-04	-3.58	ncRNA	LINC00310	17
chr7:154492609-154493092	484	13	9.61E-04	-3.58	RefSeq	HTR5A	0
chr16:30680078-30680570	493	15	9.61E-04	-3.58	RefSeq	C16orf93	497
chr21:37302201-37302616	416	12	9.61E-04	-3.58	RefSeq	RIPPLY3	1468
chr16:22734956-22735550	595	16	9.61E-04	-3.58	RefSeq	HS3ST2	1595
chr7:5886023-5886534	512	15	9.61E-04	-3.58	RefSeq	OCM	-421
chr1:117016052-117016414	363	10	9.61E-04	-3.58	ncRNA	MIR320B1	158
chrX:48640438-48640940	503	14	9.61E-04	-3.58	RefSeq	PQBP1	299
chr22:29103039-29103645	607	17	9.69E-04	-3.58	ncRNA	KIAA1656	250
chr9:134448368-134448940	573	17	9.69E-04	-3.58	RefSeq	BARHL1	554
chr6:88237982-88238482	501	14	9.77E-04	-3.58	RefSeq	SLC35A1	-880
chr2:203444893-203445472	580	16	9.77E-04	-3.57	RefSeq	ICA1L	0
chr19:60556282-60556812	531	15	9.86E-04	-3.57	RefSeq	COX6B2	1183
chr1:32436811-32437308	498	15	9.86E-04	-3.57	RefSeq	CCDC28B	-1266
chr11:64642623-64643094	472	14	9.86E-04	-3.57	RefSeq	ZNHIT2	-876
chr6:161333876-161334374	499	15	9.86E-04	-3.57	RefSeq	MAP3K4	1127
chr3:156278868-156279433	566	15	9.86E-04	-3.57	RefSeq	MME	-697
chr4:8973243-8974307	1065	27	8.08E-06	-6.23	RefSeq	USP17L25	0
chr16:30165093-30165926	834	24	8.08E-06	-5.38	ncRNA	LOC613037	-659





chr4:8954158-8955180	1023	26	8.08E-06	-5.29	RefSeq	USP17L25	0
chr4:8963612-8964816	1205	31	8.08E-06	-5.17	RefSeq	USP17L25	0
chr4:8958574-8960106	1533	40	8.08E-06	-5.13	RefSeq	USP17L25	0
chr7:72139293-72139801	509	15	4.85E-05	-4.65	ncRNA	SPDYE8P	-1047
chr16:28671193-28671704	512	14	5.65E-05	-4.61	RefSeq	NPIP89	0
chr9:108666353-108666925	573	15	1.13E-04	-4.38	RefSeq	ZNF462	1154
chr10:75175946-75176434	489	14	1.53E-04	-4.3	RefSeq	SEC24C	1809
chr8:12033509-12034183	675	18	1.78E-04	-4.26	RefSeq	USP17L2	0
chr10:126841065-126841650	586	16	1.86E-04	-4.26	RefSeq	CTBP2	-1450
chr15:20267123-20267655	533	13	1.86E-04	-4.22	ncRNA	GOLGA8DP	-30
chr7:74962166-74962836	671	19	2.02E-04	-4.18	RefSeq	SPDYE5	0
chr3:171167671-171168273	603	17	2.10E-04	-4.14	RefSeq	SEC62	397
chr9:68942605-68943141	537	16	2.10E-04	-4.13	ncRNA	LOC100133920	1424
chr2:71073806-71074319	514	15	2.26E-04	-4.11	RefSeq	TEX261	1191
chr9:166768-167286	519	15	2.26E-04	-4.1	RefSeq	CBWD1	1790
chr8:7872786-7874109	1324	36	2.26E-04	-4.09	RefSeq	USP17L3	0
chr9:93163967-93164707	741	18	2.26E-04	-4.09	RefSeq	AUH	0
chr17:562541-563046	506	13	3.07E-04	-4	RefSeq	VPS53	1801
chrX:119904878-119905376	499	14	4.93E-04	-3.83	RefSeq	CT47A10	-1323
chr18:46605822-46606334	513	10	5.25E-04	-3.82	RefSeq	MRO	-69
chr17:41946669-41947193	525	15	5.33E-04	-3.81	RefSeq	LRRC37A2	1277
chr7:72136793-72137326	534	15	5.41E-04	-3.8	ncRNA	SPDYE8P	920
chr8:11180509-11180832	324	10	5.65E-04	-3.77	RefSeq	MTMR9	1099
chrX:119947755-119948237	483	14	5.98E-04	-3.75	RefSeq	CT47A10	-435
chr3:197121675-197122168	494	15	6.38E-04	-3.72	RefSeq	TNK2	-1397
chr4:109762844-109763360	517	14	7.03E-04	-3.69	RefSeq	RPL34	1673
chr17:20167004-20167484	481	14	7.67E-04	-3.66	ncRNA	CCDC144CP	1925
chr19:4469649-4470185	537	15	7.84E-04	-3.66	RefSeq	PLIN4	-932
chr3:46715927-46716445	519	11	7.84E-04	-3.65	RefSeq	TMIE	-1382
chr3:159310440-159310981	542	15	8.24E-04	-3.64	RefSeq	RSRC1	0
chr4:8968028-8968670	643	18	8.72E-04	-3.61	RefSeq	USP17L10	-537
chr5:151044917-151045455	539	11	8.89E-04	-3.61	RefSeq	SPARC	1354
chr14:76914230-76914742	513	15	9.61E-04	-3.59	RefSeq	SAMD15	715
chrX:49065674-49066173	500	14	9.61E-04	-3.58	RefSeq	GAGE12J	221
chr3:125294404-125294909	506	14	9.61E-04	-3.58	RefSeq	KALRN	-1339
chr12:130005749-130006259	511	15	9.69E-04	-3.58	RefSeq	GPR133	1344
chr17:24013178-24013749	572	17	9.86E-04	-3.57	RefSeq	SUPT6H	0
chr21:44956800-44957318	519	12	9.86E-04	-3.57	RefSeq	TSPEAR	-876
chr3:180272616-180273081	466	14	9.86E-04	-3.57	RefSeq	ZMAT3	-265

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

**e-Table 5:** Canonical pathways overrepresented in DMRS between PRE and POST groups.

<b>DMRs with higher DNA methylation in PRE group</b>		
<b>Pathway</b>	<b>-log(p-value)</b>	<b>Ratio</b>
RAR Activation	1.81E+00	4.21E-02
Biogenesis of Mitochondria	1.36E+00	1.00E-01
Xenobiotic Metabolism Signaling	1.23E+00	2.98E-02
Increases Glomerular Injury	1.22E+00	5.66E-02
Increases Renal Proliferation	1.10E+00	3.68E-02
Hepatic Fibrosis	1.07E+00	4.04E-02
Negative Acute Phase Response Proteins	8.97E-01	1.25E-01
Fatty Acid Metabolism	8.70E-01	3.42E-02
Renal Ischemic Resistance Panel (Rat)	8.07E-01	1.00E-01
Glutathione Depletion - CYP Induction and Reactive Metabolites	7.35E-01	8.33E-02
PPAR $\alpha$ /RXR $\alpha$ Activation	7.08E-01	2.73E-02
LPS/IL-1 Mediated Inhibition of RXR Function	6.05E-01	2.39E-02
Cytochrome P450 Panel - Substrate is a Xenobiotic (Human)	5.80E-01	5.56E-02
Aryl Hydrocarbon Receptor Signaling	5.42E-01	2.48E-02
Glutathione Depletion - Phase II Reactions	5.41E-01	5.00E-02
PXR/RXR Activation	5.07E-01	2.99E-02
Nongenotoxic Hepatocarcinogenicity Biomarker Panel	5.06E-01	4.55E-02
Mitochondrial Dysfunction	4.64E-01	2.27E-02
Cytochrome P450 Panel - Substrate is a Xenobiotic (Mouse)	4.61E-01	4.00E-02
Cytochrome P450 Panel - Substrate is a Xenobiotic (Rat)	4.48E-01	3.85E-02
Renal Proximal Tubule Toxicity Biomarker Panel (Rat)	4.35E-01	3.70E-02
Reversible Glomerulonephritis Biomarker Panel (Rat)	4.35E-01	3.70E-02
Increases Cardiac Dilation	4.22E-01	3.57E-02
CAR/RXR Activation	4.10E-01	3.45E-02
Increases Liver Steatosis	4.02E-01	2.47E-02
TGF- $\beta$ Signaling	3.48E-01	2.22E-02
Mechanism of Gene Regulation by Peroxisome Proliferators via PPAR $\alpha$	3.22E-01	2.11E-02
Hepatic Cholestasis	2.78E-01	1.82E-02
Increases Liver Damage	2.72E-01	1.89E-02
NRF2-mediated Oxidative Stress Response	2.55E-01	1.71E-02
Increases Renal Nephritis	2.48E-01	2.04E-02
Increases Liver Hepatitis	2.32E-01	1.92E-02
Decreases Transmembrane Potential of Mitochondria and Mitochondrial Membrane	2.30E-01	1.71E-02
<b>DMRs with higher DNA methylation in POST group</b>		
<b>Pathway</b>	<b>-log(p-value)</b>	<b>Ratio</b>
Renal Necrosis/Cell Death	2.22E+00	3.63E-02
Cell Cycle: G1/S Checkpoint Regulation	2.10E+00	7.58E-02
Cardiac Fibrosis	2.00E+00	4.71E-02

Online supplements are not copyedited prior to posting and the author(s) take full responsibility for the accuracy of all data.

Increases Liver Hyperplasia/Hyperproliferation	1.95E+00	6.00E-02
VDR/RXR Activation	1.81E+00	6.41E-02
Cell Cycle: G2/M DNA Damage Checkpoint Regulation	1.79E+00	7.69E-02
Mechanism of Gene Regulation by Peroxisome Proliferators via PPAR $\alpha$	1.48E+00	5.26E-02
Increases Cardiac Proliferation	1.24E+00	6.38E-02
Cardiac Necrosis/Cell Death	1.18E+00	3.36E-02
Increases Liver Hepatitis	1.13E+00	5.77E-02
Increases Heart Failure	1.13E+00	8.33E-02
Aryl Hydrocarbon Receptor Signaling	1.08E+00	3.73E-02
Increases Cardiac Dilation	1.02E+00	7.14E-02
Renal Safety Biomarker Panel (PSTC)	9.70E-01	1.67E-01
Cytochrome P450 Panel - Substrate is an Eicosanoid (Human)	9.07E-01	1.43E-01
Liver Proliferation	8.69E-01	3.08E-02
Vasopressin-induced Genes in Inner Medullary Renal Collecting Duct Cells (Rat)	8.53E-01	1.25E-01
Cytochrome P450 Panel - Substrate is a Fatty Acid (Human)	7.64E-01	1.00E-01
Genes Upregulated in Response to Proteinuria-induced Oxidative Stress in Renal Proximal Tubule Cells (Human)	7.64E-01	1.00E-01
Cytochrome P450 Panel - Substrate is a Fatty Acid (Rat)	7.26E-01	9.09E-02
Glutathione Depletion - CYP Induction and Reactive Metabolites	6.93E-01	8.33E-02
Increases Bradycardia	6.07E-01	6.67E-02
Cytochrome P450 Panel - Substrate is a Fatty Acid (Mouse)	5.83E-01	6.25E-02
Hepatic Fibrosis	5.48E-01	3.03E-02
Increases Depolarization of Mitochondria and Mitochondrial Membrane	5.40E-01	5.56E-02
Oxidative Stress	5.39E-01	3.51E-02
Glutathione Depletion - Phase II Reactions	5.02E-01	5.00E-02
Increases Liver Damage	4.96E-01	2.83E-02
Acute Renal Failure Panel (Rat)	4.90E-01	3.23E-02
Decreases Depolarization of Mitochondria and Mitochondrial Membrane	4.38E-01	4.17E-02
Hepatic Cholestasis	4.28E-01	2.42E-02
Renal Proximal Tubule Toxicity Biomarker Panel (Rat)	3.98E-01	3.70E-02
Increases Renal Damage	3.47E-01	2.47E-02
Increases Renal Proliferation	3.28E-01	2.21E-02
Hepatic Stellate Cell Activation	3.15E-01	2.86E-02
TGF- $\beta$ Signaling	2.97E-01	2.22E-02
Pro-Apoptosis	2.61E-01	2.38E-02
p53 Signaling	2.55E-01	2.02E-02
Increases Renal Nephritis	2.19E-01	2.04E-02