

Gene	Chromosome	Start	End	# SNPs	p-value
<i>VPS45</i>	1	150039341	150117505	268	$8.36 \times 10^{-7}$
<i>PLEKHO1</i>	1	150121766	150131825	149	$7.00 \times 10^{-7}$
<i>TRANK1</i>	3	36868307	36986548	395	$4.71 \times 10^{-8}$
<i>NT5DC2</i>	3	52558384	52569093	144	$1.79 \times 10^{-6}$
<i>SMIM4</i>	3	52570620	52574586	136	$1.26 \times 10^{-6}$
<i>PBRM1</i>	3	52579367	52719866	329	$5.14 \times 10^{-7}$
<i>GNL3</i>	3	52719935	52728510	148	$3.65 \times 10^{-7}$
<b><i>SNORD19</i></b>	3	52723255	52723331	138	$3.55 \times 10^{-7}$
<b><i>SNORD19B</i></b>	3	52724753	52724846	137	$3.52 \times 10^{-7}$
<b><i>SNORD69</i></b>	3	52726751	52726828	132	$3.45 \times 10^{-7}$
<i>GLT8D1</i>	3	52728503	52740048	147	$3.48 \times 10^{-7}$
<i>SPCS1</i>	3	52739856	52742197	133	$3.67 \times 10^{-7}$
<i>NEK4</i>	3	52744795	52804965	213	$1.63 \times 10^{-7}$
<i>ITIH1</i>	3	52811601	52826084	177	$2.34 \times 10^{-8}$
<i>ITIH3</i>	3	52828783	52843025	177	$1.06 \times 10^{-8}$
<i>ITIH4</i>	3	52847005	52864717	194	$1.05 \times 10^{-8}$
<i>MUSTN1</i>	3	52863875	52869318	191	$1.96 \times 10^{-8}$
<i>TMEM110-MUSTN1</i>	3	52867130	52931597	278	$3.84 \times 10^{-8}$
<i>TMEM110</i>	3	52870771	52931597	273	$4.36 \times 10^{-8}$
<i>SFMBT1</i>	3	52937582	53080089	467	$1.09 \times 10^{-6}$
<i>CD47</i>	3	107761940	107809935	251	$1.07 \times 10^{-6}$
<i>SSBP2</i>	5	80713178	81047072	696	$2.53 \times 10^{-7}$
<i>FAM196B</i>	5	169290718	169407744	484	$8.00 \times 10^{-8}$
<i>TFAP2B</i>	6	50786438	50815326	275	$3.18 \times 10^{-7}$
<i>RPS6KA2</i>	6	166822853	167275771	1486	$1.87 \times 10^{-6}$
<i>MRPS33</i>	7	140705960	140714781	189	$5.41 \times 10^{-7}$
<b><i>LOC100505933</i></b>	10	111705316	111768139	190	$5.81 \times 10^{-7}$
<i>ADD3</i>	10	111756107	111895323	226	$1.70 \times 10^{-7}$
<i>MYRF</i>	11	61520120	61555989	197	$3.50 \times 10^{-8}$
<b><i>DKFZP434K028</i></b>	11	61521500	61525136	154	$1.18 \times 10^{-6}$
<i>TMEM258</i>	11	61556601	61560085	146	$3.62 \times 10^{-8}$
<b><i>MIR611</i></b>	11	61559966	61560033	137	$4.43 \times 10^{-8}$
<i>FEN1</i>	11	61560108	61564714	149	$3.81 \times 10^{-8}$
<i>FADS1</i>	11	61567096	61584529	200	$3.60 \times 10^{-8}$
<b><i>MIR1908</i></b>	11	61582632	61582712	165	$1.25 \times 10^{-7}$
<i>FADS2</i>	11	61583727	61634825	260	$5.96 \times 10^{-7}$
<i>FADS3</i>	11	61640997	61659006	266	$9.88 \times 10^{-7}$
<i>MARK2</i>	11	63606399	63678492	232	$1.86 \times 10^{-6}$
<i>GAL3ST3</i>	11	65808235	65816651	174	$1.70 \times 10^{-6}$
<i>SF3B2</i>	11	65819815	65836382	179	$1.16 \times 10^{-6}$
<i>PACS1</i>	11	65837823	66012218	364	$9.46 \times 10^{-7}$
<i>CACNA1C</i>	12	2162415	2807115	1355	$2.42 \times 10^{-8}$
<b><i>CACNA1C-AS4</i></b>	12	2329702	2332647	149	$1.80 \times 10^{-7}$
<b><i>CACNA1C-IT3</i></b>	12	2378941	2397911	130	$1.98 \times 10^{-8}$
<i>KMT2D</i>	12	49412757	49449107	114	$3.09 \times 10^{-7}$
<i>RHEBL1</i>	12	49458467	49463775	94	$4.36 \times 10^{-7}$
<i>STARD9</i>	15	42867856	43013196	240	$8.45 \times 10^{-7}$
<b><i>EFTUD1P1</i></b>	15	84748938	84795353	224	$1.18 \times 10^{-6}$
<b><i>LOC100505679</i></b>	15	84841241	84850985	89	$6.91 \times 10^{-7}$
<b><i>LOC642423</i></b>	15	84868829	85748518	1841	$2.53 \times 10^{-7}$
<i>DNM1P41</i>	15	85045805	85050249	85	$1.29 \times 10^{-6}$
<i>GOLGA6L5</i>	15	85047737	85060078	108	$3.58 \times 10^{-7}$
<b><i>UBE2Q2P1</i></b>	15	85070426	85114026	195	$1.23 \times 10^{-7}$
<i>LINC00933</i>	15	85113879	85123412	198	$8.60 \times 10^{-8}$
<i>ZSCAN2</i>	15	85144248	85166947	221	$7.00 \times 10^{-8}$
<b><i>SCAND2P</i></b>	15	85174690	85185694	181	$3.27 \times 10^{-7}$
<i>WDR73</i>	15	85186011	85197524	190	$4.94 \times 10^{-7}$
<i>NMB</i>	15	85198359	85201802	178	$7.04 \times 10^{-7}$
<i>SEC11A</i>	15	85212767	85259691	257	$6.69 \times 10^{-7}$
<i>ZNF592</i>	15	85291817	85349663	283	$5.63 \times 10^{-7}$
<i>ALPK3</i>	15	85359910	85416713	401	$6.28 \times 10^{-7}$
<i>TERF2</i>	16	69389463	69419891	192	$1.93 \times 10^{-6}$
<i>LRRC3C</i>	17	38097726	38100987	273	$1.85 \times 10^{-6}$
<i>GSDMA</i>	17	38119225	38134019	346	$1.97 \times 10^{-6}$
<i>HLF</i>	17	53342320	53402426	291	$2.05 \times 10^{-6}$
<i>SLC44A2</i>	19	10713120	10755235	294	$5.17 \times 10^{-7}$
<b><i>ILF3-AS1</i></b>	19	10762537	10764548	139	$1.13 \times 10^{-6}$
<i>ILF3</i>	19	10764936	10803095	191	$1.22 \times 10^{-6}$
<i>QTRT1</i>	19	10812111	10824043	121	$1.52 \times 10^{-6}$
<i>NCAN</i>	19	19322781	19363061	243	$5.25 \times 10^{-8}$
<i>HAPLN4</i>	19	19366451	19384074	161	$1.17 \times 10^{-7}$
<i>TM6SF2</i>	19	19375173	19384074	155	$1.46 \times 10^{-7}$
<i>SUGP1</i>	19	19387321	19431321	223	$5.69 \times 10^{-7}$
<i>GATAD2A</i>	19	19496641	19619741	293	$8.15 \times 10^{-7}$
<i>TSSK6</i>	19	19625027	19626469	134	$3.36 \times 10^{-7}$
<i>YJEFN3</i>	19	19627018	19648393	153	$3.21 \times 10^{-7}$
<i>CILP2</i>	19	19649073	19657468	137	$2.50 \times 10^{-7}$
<i>PBX4</i>	19	19672515	19729725	191	$5.12 \times 10^{-8}$
<i>LPAR2</i>	19	19734465	19739739	110	$5.92 \times 10^{-7}$
<i>GMIP</i>	19	19740284	19754455	144	$6.77 \times 10^{-7}$
<i>STK4</i>	20	43595119	43708593	369	$2.33 \times 10^{-7}$
<i>KCNS1</i>	20	43720949	43729753	203	$4.36 \times 10^{-9}$
<i>WFDC5</i>	20	43738092	43743813	203	$4.43 \times 10^{-8}$
<i>WFDC12</i>	20	43752066	43753106	199	$6.67 \times 10^{-7}$
<i>XPNPEP3</i>	22	41253084	41363888	120	$9.20 \times 10^{-7}$
<i>DNAJB7</i>	22	41255553	41258130	49	$7.97 \times 10^{-7}$

Table 1: **Resulting associated genes using PASCAL.** These are the significant genes with a p-value lower than the Bonferroni correction (p-value ; 2.29E-6) sorted by chromosome. The genes in bold are the novel genes found with PASCAL.