

## Appendix 2: The top 100 gene correlates of *Gap43*.

Record	Gene ID	Homologene ID	Symbol	Description	Location (Chr, Mb)	Mean Expr	Max LRS	Max LRS Location (Chr: Mb)
1	ILMN_1234990	14432	Gap43	growth associated protein 43	Chr16: 42.248876	10.50495	13.7	Chr1: 89.386210
2	ILMN_1224076	67238	MGC12966	protein LOC84792 (MGC12966)	Chr5: 144.325048	8.793725	11.1	Chr2: 23.949160
3	ILMN_2854983	64450	Gpr85	G protein-coupled receptor 85	Chr6: 13.785555	8.7457	11	ChrX: 143.400776
4	ILMN_2731454	14026	Evl	Ena-vasodilator stimulated phosphoprotein	Chr12: 109.926393	11.0574625	14.3	Chr2: 179.257463
5	ILMN_2746167	381813	Prmt8	protein arginine N-methyltransferase 8	Chr6: 127.639166	9.159825	13.3	ChrX: 143.400776
6	ILMN_1240067	22099	Tsn	translin	Chr1: 120.201292	10.4232125	14.1	Chr2: 179.695600
7	ILMN_2654296	19325	Rab10	RAB10, member RAS oncogene family	Chr12: 3.248080	9.2502375	13.4	Chr2: 179.695600
8	ILMN_1246330	208846	Daam1	dishevelled associated activator of morphogenesis 1	Chr12: 73.093173	11.0213375	12.1	ChrX: 143.400776
9	ILMN_2614884	18744	Pja1	praja1, RING-H2 motif containing	Chr4: 117.578420	13.14565	12.2	ChrX: 143.400776
10	ILMN_2623216	53328	Pgrmc1	progesterone receptor membrane component 1	ChrX: 34.145703	11.2371375	14	ChrX: 143.400776
11	ILMN_2743082	59058	Bhlhb5	basic helix-loop-helix domain containing, class B5 (GABAergic amacrine and type 2 OFF-cone bipolar cell expression signature)	Chr3: 17.957204	8.7561625	11.9	Chr16: 70.195003
12	ILMN_2665117	94253	Hecw1	HECT, C2 and WW domain containing E3 ubiquitin protein ligase 1	Chr13: 14.320743	8.4342875	12.3	ChrX: 143.400776
13	ILMN_1214703	11931	Atp1b1	ATPase, Na <sup>+</sup> /K <sup>+</sup> transporting, beta 1 polypeptide	Chr1: 166.367291	12.7573875	14.1	ChrX: 143.400776
14	ILMN_2909336	234267	Gpm6a	glycoprotein m6a downstream element, RIKEN cDNA 9330121K16	Chr8: 56.146136	12.2162375	15	ChrX: 143.400776
15	ILMN_1237917	13602	Sparcl1	SPARC-like 1 (mast9, hevin)	Chr5: 104.508468	8.9253875	16.2	ChrX: 143.400776
16	ILMN_1244790	59079	Erb2ip	Erb2 interacting protein	Chr13: 104.609361	9.3928625	10.8	Chr2: 180.825581
17	ILMN_2481902	54712	Plxnc1	plexin C1	Chr10: 94.253869	7.8764875	14.2	ChrX: 143.400776
18	ILMN_1224268	66407	Mrps15	mitochondrial ribosomal protein S15	Chr4: 125.728600	8.5336875	15.7	Chr12: 55.741343

19	ILMN_2696620	192174	16059	Rwdd4a	RWD domain containing 4A	Chr8: 48.638051	9.94935	12	ChrX: 143.400776
20	ILMN_2465770	59025	3780	Usp14	ubiquitin specific peptidase 14	Chr15: 97.026460	8.6892625	12.4	ChrX: 143.400776
21	ILMN_2522571	56086	55707	Set	SET translocation	Chr3: 51.319362	10.816125	13.9	Chr1: 87.687978
22	ILMN_2721385	13518	85087	Dst	dystonin	Chr1: 34.364784	10.59865	11.4	Chr7: 98.732420
23	ILMN_1229753	19047	100608	Ppp1cc	protein phosphatase 1, catalytic subunit, gamma isoform	Chr5: 122.624927	10.693675	13.2	Chr16: 70.195003
24	ILMN_1235203	104001	49654	Rtn1	reticulon 1	Chr12: 73.312778	13.0088875	11.8	Chr2: 179.695600
25	ILMN_1259851	16493	1683	Kcna5	potassium voltage-gated channel, shaker-related subfamily, member 5	Chr6: 126.482907	10.090825	16.8	Chr1: 90.246344
26	ILMN_1248132	16765	4063	Stmn1	stathmin 1	Chr4: 134.029500	10.1033125	15.2	Chr2: 172.563705
27	ILMN_2933914	59029	4240	Psm14	proteasome (prosome, macropain) 26S subunit, non-ATPase, 14	Chr2: 61.635478	10.9731875	11.9	Chr2: 179.257463
28	ILMN_2783918	56382	20900	Rab9	RAB9, member RAS oncogene family	Chr13: 99.043959	9.279075	12.1	Chr2: 179.257463
29	ILMN_1250438	17357	40748	Marcks1	MARCKS-like 1	Chr4: 129.192935	9.228625	12.6	Chr2: 179.257463
30	ILMN_2701093	16451	1678	Jak1	Janus kinase 1	Chr4: 100.825966	8.7727375	11.2	ChrX: 143.400776
31	ILMN_3090581	56208	2794	Becn1	beclin 1 (autophagy, coiled-coil, myosin-like BCL2-interacting protein)	Chr11: 101.151114	8.69555	14.9	ChrX: 143.400776
32	ILMN_1258515	67869	22978	Paip2	polyadenylate-binding protein-interacting protein 2	Chr18: 35.776714	11.8614875	11.7	Chr16: 70.195003
33	ILMN_1222794	68839	27876	Ankrd46	ankyrin repeat domain 46	Chr15: 36.407636	11.8752875	11.3	ChrX: 143.400776
34	ILMN_1237026	13839	55824	Epha5	Eph receptor A5	Chr5: 84.494940	8.37945	14.8	ChrX: 143.400776
35	ILMN_1239808	70082	12347	Lysmd2	LysM, putative peptidoglycan-binding, domain containing 2	Chr9: 75.485199	9.524525	18.2	Chr12: 57.107314
36	ILMN_2633229	11946	2985	Atp5a1	ATP synthase, H+ transporting, mitochondrial F1 complex, alpha subunit, isoform 1	Chr18: 78.021179	11.910275	11.7	ChrX: 143.400776
37	ILMN_1248892	234463	32403	Tmem34	transmembrane protein 34	Chr8: 80.120584	9.415425	11.3	Chr2: 179.695600
38	ILMN_3102035	15572	40729	Elavl4	ELAV (embryonic lethal, abnormal vision, Drosophila)-like 4 (Hu antigen D)	Chr4: 109.876759	8.7938125	13.2	Chr7: 95.847711
39	ILMN_2775885	12314	116117	Calm2	calmodulin 2	Chr17: 87.832952	10.09395	12.7	ChrX: 143.400776

40	ILMN_1239002	18472	371	Pafah1b1	platelet-activating factor acetylhydrolase, isoform 1b, beta1 subunit	Chr11: 74.487683	8.8173875	12.4	ChrX: 143.400776
41	ILMN_2755660	19231	122175	Ptma	prothymosin alpha	Chr1: 88.427080	12.231075	11.4	Chr2: 179.695600
42	ILMN_2488062	50786	9277	Hs6st2	heparan sulfate 6-O-sulfotransferase 2	ChrX: 48.741277	7.8639625	15.4	Chr7: 95.155269
43	ILMN_2874853	55949	1480	Eef1b2	eukaryotic translation elongation factor 1 beta 2	Chr1: 63.225409	11.4675375	12.9	Chr1: 90.246344
44	ILMN_1246561			LOC237081		ChrX: 138.646161	9.648075	14.2	ChrX: 143.400776
45	ILMN_2698958	76709	4187	Arpc2	actin related protein 2/3 complex, subunit 2	Chr1: 74.314483	12.3022875	14.7	Chr2: 179.257463
46	ILMN_2751854	234593	23228	Ndrp4	N-myc downstream regulated gene 4	Chr8: 98.238731	10.6188	15	ChrX: 143.400776
47	ILMN_2821247	69352	11172	Necab1	N-terminal EF-hand calcium binding protein 1	Chr4: 14.879597	8.2286	11.2	Chr1: 90.246344
48	ILMN_2670352	76959	5757	Chmp5	chromatin modifying protein 5	Chr4: 40.911985	9.6598875	11	Chr16: 70.195003
49	ILMN_2758120	14390	1543	Gabpa	GA repeat binding protein, alpha	Chr16: 84.863111	7.3243875	12.5	Chr16: 70.195003
50	ILMN_2829636	27362	32155	Dnajb9	DnaJ (Hsp40) homolog, subfamily B, member 9	Chr12: 45.307125	11.4292875	12.5	Chr16: 70.195003
51	ILMN_2960308	15528	20500	Hspe1	heat shock protein 1 (chaperonin 10)	Chr1: 55.145957	10.6880375	11.1	Chr2: 19.000349
52	ILMN_2660596	242819	16286	Gm440	gene model 440, (NCBI)	Chr5: 8.490646	9.5060625	13.7	Chr1: 89.386210
53	ILMN_2786164	228359	20909	Arhgap1	Rho GTPase activating protein 1	Chr2: 91.512251	10.726	13.3	Chr12: 57.107314
54	ILMN_2631953	14009	3636	Etv1	ets variant gene 1	Chr12: 39.593132	8.9726375	18.3	ChrX: 143.400776
55	ILMN_1259621	66960	11478	2310047O13Rik	RIKEN cDNA 2310047O13 gene	Chr2: 12.276920	7.8779	10.3	Chr15: 87.788313
56	ILMN_1253545	17330	37980	Minpp1	multiple inositol polyphosphate histidine phosphatase 1	Chr19: 32.589493	9.019675	11.3	Chr1: 90.246344
57	ILMN_2607022	19262	20621	Ptptra	protein tyrosine phosphatase, receptor type, A	Chr2: 130.379329	9.1703375	14.2	Chr15: 87.307011
58	ILMN_1252832	69082	10216	Zc3h15	zinc finger CCCH-type containing 15	Chr2: 83.504533	11.7138375	13.6	Chr1: 90.246344
59	ILMN_2454710	243382	36819	Ppm1k	protein phosphatase 1K (PP2C domain containing)	Chr6: 57.457024	7.5515625	14.7	Chr15: 87.929487
60	ILMN_2626345	18196	7868	Nsg1	neuron specific gene family member 1	Chr5: 38.528563	8.352325	15.4	ChrX: 143.400776

61	ILMN_1221290	15078	116395	H3f3a	H3 histone, family 3A	Chr11: 61.229491	13.6874	12.2	Chr2: 179.257463
62	ILMN_2596761	66118	41628	Cip29	cytokine induced protein 29 kDa	Chr10: 128.309494	9.218625	12	Chr2: 179.695600
63	ILMN_2485148	30960	37824	Vapa	vesicle-associated membrane protein, associated protein A	Chr17: 65.929483	11.1702625	13	ChrX: 143.400776
64	ILMN_1249586	15481	68524	Hspa8	heat shock protein 8	Chr9: 40.613038	14.4004	12.3	Chr2: 179.257463
65	ILMN_2677882	66860	18946	Tanc1	tetratricopeptide repeat, ankyrin repeat and coiled-coil containing 1	Chr2: 59.683691	9.4281625	16.1	ChrX: 143.400776
66	ILMN_2716212	13642	3019	Efnb2	ephrin B2	Chr8: 8.617838	7.6675875	11.6	Chr1: 90.246344
67	ILMN_1259482	18458	37638	Pabpc1	poly A binding protein, cytoplasmic 1	Chr3: 59.237108	12.4083375	17.6	Chr2: 179.695600
68	ILMN_1250676	382096		LOC382096	similar to Peptidyl-prolyl cis-trans isomerase A (PPIase) (Rotamase) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Chr11: 6.319185	9.26525	13.3	ChrX: 143.400776
69	ILMN_2615628	67515	8226	Ttc33	tetratricopeptide repeat domain 33	Chr15: 5.168196	8.9767625	10.8	Chr2: 179.695600
70	ILMN_3155380	13063	68675	Cycc	cytochrome c, somatic	Chr6: 50.514519	8.553875	11.3	Chr2: 172.563705
71	ILMN_2895339	319604	18702	B930006L02Rik	RIKEN cDNA B930006L02 gene	Chr7: 107.989918	9.5401375	11.7	Chr2: 179.695600
72	ILMN_2527341	381365		Ppia	peptidylprolyl isomerase A	Chr11: 6.319490	12.368775	13.9	ChrX: 143.400776
73	ILMN_2702039	208650	15856	Cblb	Casitas B-lineage lymphoma b	Chr16: 52.207908	8.7068	13.2	ChrX: 143.400776
74	ILMN_2746641	268723		A830039N20Rik	RIKEN cDNA A830039N20 gene	Chr14: 24.111759	9.2397875	16.2	ChrX: 143.400776
75	ILMN_2475022	241944	120800	D3Ert254e	DNA segment, Chr 3, ERATO Doi 254, expressed	Chr3: 36.068702	7.548775	13.8	ChrX: 143.400776
76	ILMN_2722131	71423	14575	5430411K18Rik	RIKEN cDNA 5430411K18 gene	Chr18: 78.231501	9.13805	16.6	ChrX: 143.400776
77	ILMN_2605465	56440	99716	Snx1	sorting nexin 1	Chr9: 65.935987	9.5828	12.8	Chr1: 5.176058
78	ILMN_1238326	69721	10670	Nkiras1	NFKB inhibitor interacting Ras-like protein 1	Chr14: 19.115270	8.855825	12.5	Chr2: 172.563705
79	ILMN_1260063	319211	36142	Nol4	nucleolar protein 4	Chr18: 22.852006	8.907325	21.8	ChrX: 143.400776
80	ILMN_2721761	17936	4352	Nab1	Ngfi-A binding protein 1	Chr1: 52.514984	9.3825375	17.8	ChrX: 143.400776

81	ILMN_2751228	52653	12094	Nudcd2	NudC domain containing 2	Chr11: 40.553121	8.432375	11.1	Chr2: 19.938933
82	ILMN_1223929	56724	8572	Cript	cysteine-rich PDZ-binding protein	Chr17: 87.434670	8.68975	11.7	Chr16: 70.195003
83	ILMN_1255376	68098	22894	Rchy1	ring finger and CHY zinc finger domain containing 1	Chr5: 92.378555	9.8165125	12.3	ChrX: 143.400776
84	ILMN_2690203	71750	8954	R3hdm2	R3H domain containing 2	Chr10: 126.936276	11.18445	13.2	Chr15: 87.307011
85	ILMN_1224318	226823	9395	Kctd3	potassium channel tetramerisation domain containing 3	Chr1: 190.795002	9.8495375	12.8	Chr15: 87.307011
86	ILMN_2440868	77935		A430109M19Rik	RIKEN cDNA A430109M19 gene	Chr10: 95.507331	7.89675	12.3	Chr1: 90.246344
87	ILMN_2612325	70984	8531	4931406C07Rik	RIKEN cDNA 4931406C07 gene	Chr9: 15.087899	8.5276	15	ChrX: 143.400776
88	ILMN_2771074	53379	22992	Hnrpa2b1	heterogeneous nuclear ribonucleoprotein A2/B1	Chr6: 51.413129	9.2301	11.2	Chr2: 172.563705
89	ILMN_2670713	76884	7936	Cyfp2	cytoplasmic FMR1 interacting protein 2	Chr11: 46.007372	10.4925875	15.9	ChrX: 143.400776
90	ILMN_2994460	12387	1434	Ctnnb1	catenin (cadherin associated protein), beta 1	Chr9: 120.869467	14.0286125	10	ChrX: 143.400776
91	ILMN_1241910	66413	7157	Psmc6	proteasome (prosome, macropain) 26S subunit, non-ATPase, 6	Chr14: 14.946717	8.2691375	11.5	Chr16: 70.195003
92	ILMN_3123441	667250	121967	LOC667250	similar to H3 histone, family 3B	Chr15: 38.893396	10.816475	12.7	Chr1: 90.246344
93	ILMN_1223194	73120		Cacnb4	calcium channel, voltage-dependent, beta 4	Chr2: 52.284061	8.451125	18.8	ChrX: 143.400776
94	ILMN_1258158	104776	4082	Aldh6a1	aldehyde dehydrogenase family 6, subfamily A1	Chr12: 85.771734	10.3497625	11.4	ChrX: 143.400776
95	ILMN_2510875	27362	32155	Dnajb9	DnaJ (Hsp40) homolog, subfamily B, member 9	Chr12: 45.306951	9.2282	14.1	ChrX: 143.400776
96	ILMN_2489147	234889	47953	Gucy1a2	guanylate cyclase 1 soluble alpha 2	Chr9: 3.905565	9.052425	16.1	ChrX: 147.758346
97	ILMN_2508639	98403	9188	Zfp451	zinc finger protein 451	Chr1: 33.818684	9.4957	10.8	Chr15: 87.908142
98	ILMN_1215212	11852	68377	Rhob	ras homolog gene family, member B	Chr12: 8.504732	10.28125	14.4	Chr12: 53.911047
99	ILMN_2498779	77853	10021	Msl21	male-specific lethal 2-like 1 (Drosophila)	Chr9: 101.006554	9.1615	14.2	Chr15: 87.307011
100	ILMN_1217822	70178	26429	2210412D01Rik	RIKEN cDNA 2210412D01 gene	Chr7: 91.258131	8.77315	13.9	Chr12: 57.107314

Trait : HEI Retina Illumina V6.2 (April 2010) RankInv : ILMN\_1234990  
Database : HEI Retina Illumina V6.2 (April 2010) RankInv