

GO group	z-score	# genes (observed)	# genes (expected)	list of genes	Locus IDs
O-sialoglycoprotein endopeptidase activity	8.92	2	0.05	OSGEPL1, OSGEP	64172, 55644
olfactory receptor activity	7.09	7	0.8	OR2H2, OR5P3, OR3A1, OR7A5, OR6C3, OR5I1, FLJ31393	7932, 120066, 4994, 26659, 254786, 10798, 219445
transferase activity, transferring acyl groups, acyl groups converted into alkyl on transfer	5.63	3	0.25	ACLY, WDHD1, CS	47, 11169, 1431
nucleic acid binding	5.07	146	100.91	LHX9, SLC19A2, DMAP1, ARID4B, ELYS, MCM6, DDX1, SP110, PPIG, ZNFN1A2, EFG1, MSX1, PDCD2, ZNF451, ZNF187, RABGEF1, MGC33584, VIK, ZRF1, WHSC1L1, CGI-72, HNF4G, MSC, DDX58, NFIB, CXXC6, ASCC1, ZNF33A, RAG2, SOX6, SOX5, SBNO1, C2F, DZIP1, SUHW4, AWP1, ZNF291, EIF3S8, ERAL1, SETBP1, HKR1, HNRPL, POLD1, U2AF2, KLF1, PRKCBP1, PCNA, C21orf66, DSCR1, NHP2L1, APOBEC3C, SE20-4, FLJ10178, FLJ25735, SMARCAD1, TRIM33, POLR3B, GPATC2, PAX8, ERCC3, GLI2, FLJ10379, SALF, NR2C2, TRNT1, EXOSC7, HESX1, NSD1, KIAA0853, BRCA2, TCF4, SHPRH, TSPYL1, WDHD1, CTAGE5, RNASE4, SIX1, APEX1, C14orf6, CHD8, SERPINA3, BRF1, MASK-BP3, STAT2, HELLS, ZNF265, APLP2, PGR, CHD1L, EP400, MEF2A, RPA2, MPG, ADARB2, ZMYND11, DDX52, ZFP62, P66beta, SFPQ, HNRPR, ZNF496, ZFHX1B, BAZ2B, ORC2L, KIAA0082, ACO1, ARID5B, RECQL, RSN, MYCPBP, FLJ35867, TCF12, GTF3C1, MYOCD, STAT3, DDX5, ZNF540, ZNF313, TOP1, PAX1, JARID1C, N4BP2, HNRPD, NFKB1, NR1H4, TOP2B, WBP4, APRIN, SETDB2, BCLAF1, BAZ1A, ZFYVE26, ANG, SIX4, CSEN, NCOA6, FLJ31121, NAP1L1, PCBP2, MLL, ATM, CHD1, GFI1B, SNRPA1, AATF, RBM3	56956, 10560, 55929, 51742, 25909, 4175, 1653, 3431, 9360, 22807, 85476, 4487, 5134, 26036, 7741, 27342, 285971, 79027, 27000, 54904, 51105, 3174, 9242, 23586, 4781, 80312, 51008, 7581, 5897, 55553, 6660, 55206, 10436, 22873, 54816, 54469, 49855, 8663, 26284, 26040, 284459, 3191, 5424, 11338, 10661, 23613, 5111, 94104, 1827, 4809, 27350, 64061, 55086, 158506, 56916, 51592, 55703, 55105, 7849, 2071, 2736, 55133, 286749, 7182, 51095, 23016, 8820, 64324, 23091, 675, 6925, 257218, 7259, 11169, 4253, 6038, 6495, 328, 122651, 57680, 12, 2972, 404734, 6773, 3070, 9406, 334, 5241, 9557, 57634, 4205, 6118, 4350, 105, 10771, 11056, 92379, 57459, 6421, 10236, 84838, 9839, 29994, 4999, 23070, 48, 84159, 5965, 6249, 10260, 146050, 6938, 2975, 93649, 6774, 1655, 163255, 55905, 7150, 5075, 8242, 55728, 3184, 4790, 9971, 7155, 11193, 23047, 83852, 9774, 11177, 23503, 283, 51804, 30818, 23054, 153527, 4673, 5094, 4297, 472, 1105, 8328, 6627, 26574, 5935
acetyl-CoA C-acyltransferase activity	4.89	2	0.15	ACAA2, HADHB	10449, 3032
catalase activity	4.89	2	0.15	GTF2E1, C8orf2	2960, 11160
aconitate hydratase activity	4.89	2	0.15	ACO2, ACO1	50, 48
hematopoietin/interferon-class (D200-domain) cytokine receptor signal transducer activity	4.89	2	0.15	STAT2, STAT3	6773, 6774
hydrolase activity, hydrolyzing N-glycosyl compounds	4.76	4	0.55	APEX1, MPG, SH3BP4, BST1	328, 4350, 23677, 683

hydrolase activity	4.7	105	69.24	ABCB10, ELYS, MCM6, USP40, DDX1, OSGEPL1, ACPP, NLGN1, SENP6, PSMB1, ABCC10, PRSS16, PEX6, HDAC9, CSMD3, DDX58, SARA1, MTMR2, USP47, RAG2, ADAM10, CAPN3, FURIN, ADAMTS18, ABCA10, G6PC, POLD1, KLK11, PNKP, ATP13A, NPEPL1, HDHD4, PLCB4, CECR5, APOBEC3C, ACATE2, RAB9A, ATP1B4, SMARCAD1, IF, CHIA, AMY2A, DPP10, ERCC3, CAPN13, FLJ10379, EXOSC7, ADAM29, AGTPBP1, GDA, ATP12A, TPTE2, ARSF, EPM2A, SHPRH, OSGEP, CTAGE5, RNASE4, APEX1, C14orf6, CHD8, PPP2R2B, MGEA5, HELLS, NRD1, CHD1L, EP400, ADAMTS17, MPG, PRSS33, ADARB2, DDX52, USP21, RRAGC, SH3BP4, CPA3, BST1, PPM2C, PAPP, YME1L1, RECQL, CILP, SPC18, UQCRC2, CES1, DDX5, PTPRA, MX1, MX2, DNAL4, MTMR1, N4BP2, ATP1A1, PPM1B, FLJ22405, ANG, TRPC4AP, KAZALD1, MPHOSPH1, BACE1, C11orf11, CHD1, ADAMTS19, KIAA0433, CTSB	23456, 25909, 4175, 55230, 1653, 64172, 55, 22871, 26054, 5689, 89845, 10279, 5190, 9734, 114788, 23586, 56681, 8898, 55031, 5897, 102, 825, 5045, 170692, 10349, 2538, 5424, 11012, 11284, 57130, 79716, 140838, 5332, 27440, 27350, 23597, 9367, 23439, 56916, 3426, 27159, 279, 57628, 2071, 92291, 55133, 23016, 11086, 23287, 9615, 479, 93492, 416, 7957, 257218, 55644, 4253, 6038, 328, 122651, 57680, 5521, 10724, 3070, 4898, 9557, 57634, 170691, 4350, 260429, 105, 11056, 27005, 64121, 23677, 1359, 683, 54704, 5069, 10730, 5965, 8483, 23478, 7385, 1066, 1655, 5786, 4599, 4600, 10126, 8776, 55728, 476, 5495, 64419, 283, 26133, 81621, 9585, 23621, 747, 1105, 171019, 23262, 1508
ATP-dependent helicase activity	4.61	13	4.02	DDX1, DDX58, SMARCAD1, ERCC3, SHPRH, CHD8, HELLS, CHD1L, EP400, DDX52, RECQL, DDX5, CHD1	1653, 23586, 56916, 2071, 257218, 57680, 3070, 9557, 57634, 11056, 5965, 1655, 1105
nitric-oxide synthase activity	4.58	3	0.35	NOS3, FANCC, NOS1	4846, 2176, 4842
helicase activity	4.3	14	4.83	DDX1, DDX58, SBNO1, SMARCAD1, ERCC3, SHPRH, CHD8, HELLS, CHD1L, EP400, DDX52, RECQL, DDX5, CHD1	1653, 23586, 55206, 56916, 2071, 257218, 57680, 3070, 9557, 57634, 11056, 5965, 1655, 1105
vasopressin receptor activity	4.12	2	0.2	OXTR, AVPR1B	5021, 553
vasopressin-like receptor activity	4.12	2	0.2	OXTR, AVPR1B	5021, 553
zinc ion transporter activity	4.12	2	0.2	SLC30A3, SLC30A5	7781, 64924
ATP binding	4.08	73	46.91	PANK4, ABCB10, MCM6, DDX1, MYO1B, ALS2CR7, MYO6, ABCC10, PEX6, DDX58, SBNO1, TRPM7, EPB42, VPS4A, ABCA10, CSNK1D, ACLY, FLJ12735, SARS2, PNKP, ATP13A, PAK3, SMARCAD1, PAX8, ERCC3, PRKCN, TRNT1, PRKCD, NEK1, STK10, ATP12A, SHPRH, CHD8, HELLS, PRKACB, P2RX3, CHD1L, KIF20A, NME5, EP400, SEPHS1, DDX52, UBE1, MGC4796, FARSLB, STK39, HSPD1, TNIK, GRK4, GNE, HSPA5, MUSK, YME1L1, RECQL, GALK2, MYH11, TAO1, DDX5, MYO5B, DYRK1A, MAPK1, N4BP2, MGC16169, ATP1A1, FLJ32685, TOP2B, APRIN, TRPC4AP, TBK1, MPHOSPH1, CHD1, KIAA1688, PKMYT1	55229, 23456, 4175, 1653, 4430, 65061, 4646, 89845, 5190, 23586, 55206, 54822, 2038, 27183, 10349, 1453, 47, 79915, 54938, 11284, 57130, 5063, 56916, 7849, 2071, 23683, 51095, 5580, 4750, 6793, 479, 257218, 57680, 3070, 5567, 5024, 9557, 10112, 8382, 57634, 22929, 11056, 7317, 83931, 10056, 27347, 3329, 23043, 2868, 10020, 3309, 4593, 10730, 5965, 2585, 4629, 9344, 1655, 4645, 1859, 5594, 55728, 93627, 476, 152110, 7155, 23047, 26133, 29110, 9585, 1105, 80728, 9088
ATPase activity	4.07	25	11.61	ABCB10, MCM6, DDX1, ABCC10, PEX6, DDX58, ABCA10, ATP13A, ATP1B4, SMARCAD1, ERCC3, ATP12A, SHPRH, CHD8, HELLS, CHD1L, EP400, DDX52, RECQL, DDX5, DNAL4, ATP1A1, TRPC4AP, MPHOSPH1, CHD1	23456, 4175, 1653, 89845, 5190, 23586, 10349, 57130, 23439, 56916, 2071, 479, 257218, 57680, 3070, 9557, 57634, 11056, 5965, 1655, 10126, 476, 26133, 9585, 1105
motor activity	4.04	14	5.13	MYO1B, MYO6, FLJ32752, ACTA2, KIF20A, CGN, DNCI2, DNAI1, MYH11, DNCL2B, MYO5B, DNAL4, MPHOSPH1, KIAA1688	4430, 4646, 144132, 59, 10112, 57530, 1781, 27019, 4629, 83657, 4645, 10126, 9585, 80728