

Table S24: GO component analysis of ranked signals from CEU population using the T_1 test statistic.

Description	p -value	Enrichment	Genes
Integral to luminal side of endoplasmic reticulum membrane	1.7×10^{-17}	273.3	HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1
ER to Golgi transport vesicle membrane	1.1×10^{-16}	227.7	HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1
Transport vesicle membrane	1.5×10^{-16}	139.8	CPE, HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1
MHC protein complex	3.9×10^{-16}	200.9	HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1
Endocytic vesicle membrane	7.7×10^{-15}	96.1	DMBT1, HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1
MHC class II protein complex	3.3×10^{-13}	71.9	HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DQB2, HLA-DRA, HLA-DRB1, HLA-DRB5
Integral to endoplasmic reticulum membrane	6.2×10^{-13}	80.4	HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1
Plasma membrane	9.0×10^{-13}	1.5	ABCA1, ABCA4, ABCB5, ABCC4, ABCG8, ACPP, ADAM12, ADAM28, ADCY3, ADCY5, ADD2, ADRA1A, ALPL, ANGPT1, ANGPT2, ANK2, ANK3, ANKS1B, ANO2, APBB1IP, ARHGAP24, ARHGAP18, ATP10D, ATP12A, ATP1A4, ATP8A1, ATP8B1, BAI3, BBS9, BLNK, BMPR1B, BNC2, BTN3A2, CACNA1A, CADM2, CAMK2D, CAPI, CDH10, CDH13, CDH4, CHD1L, CHL1, CHRNB3, CLDN10, CLDN14, CLSTN2, CNGA3, CNR2, CNTN1, CNTN4, CNTN5, COL13A1, CPE, CSMD2, CSMD3, CUBN, CXADR, CYBRD1, DAAMI, DAPPI, DCC, DCHS2, DGKH, DIO1, DISC1, DLG2, DLGAP1, DNAAF1, DNER, DSC1, DSCAM, DSG1, DTNA, DYM, DYNC2H1, DYSF, DYT1, ELTD1, EMID2, ENDOU, ERBB4, ESYT2, EXOC2, F2RL2, F5, FABP2, FAS, FAT2, FAT4, FHIT, FLVCR1, FMN1, FNDC1, FRAS1, FRMPD1, FSHR, GABRR1, GPC5, GPC6, GPR111, GPR139, GPR158, GPR39, GPR78, GRB10, GRIA1, GRIK2, GRIK3, GRIN2A, GRIP1, GRM5, GRM7, GRM8, HLA-A, HLA-B, HLA-C, HLA-DQA, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQA2, HLA-DQB1, HLA-DQB2, HLA-DRA, HLA-DRB1, HLA-DRB5, HLA-F, HLA-G, HPSE2, IGSF5, INADL, INPP5D, ITGA1, ITGA2, ITGA9, ITGB5, IYD, KCNA6, KCNAB1, KCNB2, KCNP4, KCNJ12, KCNJ16, KCNK2, KCNMB2, KCNMB3, KCNQ4, KCNQ5, KIRREL3, KL, KLRB1, KNG1, LAMA2, LDLRAD3, LHCGR, LRRC52, LRRC7, LRRTM4, LYPD6B, MAGI2, MAPT, MCC, MDGA2, MTUS1, MYO10, MYO16, MYO1B, MYOF, NEDD4, NETO1, NFASC, NGEF, NKAIN3, NOTCH4, NPSR1, NRCAM, NRP1, NRXN1, NSL1, NTM, NTN4, OPCML, OPRK1, OR10A1, OR10C1, OR12D2, OR13C5, OR14A16, OR1L8, ORIN2, OR1S1, OR2AK2, OR2L13, OR2T4, OR2W3, OR4C3, OR4C45, OR51B2, OR51B6, OR51E1, OR51F1, OR51I2, OR51M1, OR51Q1, OR52E2, OR52E6, OR52J3, OR52N2, OR52N4, OR52R1, OR5AC2, OR5F1, OR5I1, OR5P2, OR5W2, OR8G1, OR8G5, OR8H3, OR8I2, OR8U8, OR9G1, OR9G9, PALM2, PCDH15, PCDHA12, PCDHA13, PCDHA9, PDIA6, PHLDB2, PKP1, PLA2R1, PLCG2, PLSCR1, PLXNA4, PPFIBP1, PPYR1, PRKCE, PRKG1, PROKR2, PSD3, PTGER3, PTPN13, PXX, RAB31, RAB3C, RAMP3, RAPGEF4, RFTN1, RGS6, RIMBP2, RIMS1, RIMS2, RNPEP, ROR1, RPSA, RYR2, SCARB1, SEMA5A, SEMA6D, SGCG, SGCZ, SGIP1, SH3GL2, SIRPA, SKAP2, SLC12A6, SLC15A2, SLC16A14, SLC19A3, SLC1A2, SLC1A6, SLC22A16, SLC22A5, SLC24A4, SLC27A6, SLC28A1, SLC2A9, SLC9A4, SLC01B1, SLC01B3, SLC05A1, SNCA, SNTB1, SNTG2, SPRED1, SVIL, SWAP70, SYK, TANC1, TAP1, TAP2, TEC, TEK, TES, TESC, THSD7A, TIAM1, TJP2, TPO, TRPC4, TRPC6, TSHR, TULP3, UNC13C, VAV3, VNN1, WWOX
Cytoplasmic vesicle membrane	1.9×10^{-12}	29.7	CPE, DMBT1, HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1
Intrinsic to endoplasmic reticulum membrane	2.7×10^{-12}	67.6	HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1
Vesicle membrane	3.1×10^{-12}	28.5	CPE, DMBT1, HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1

GO categories in which false discovery rate is less than 0.01.

Table S24 continued.

Description	p-value	Enrichment	Genes
Membrane part	3.6×10^{-12}	1.2	AADAC, AADACL2, ABCA1, ABCA13, ABCA4, ABCB5, ABCC11, ABCC4, ABCG8, ABO, ACER1, ACP, ADAMI2, ADAM28, ADAM29, ADCY3, ADCY5, ADCY8, ADRA1A, AIFM2, AJAPI, AKAP6, ALK, ALPL, ANGPT1, ANK2, ANK3, ANO1, ANO2, ANO3, ANXA6, AP1S3, AP3B1, APP, AQP8, AQP9, AQPEP, ART3, ASAH2, ASGR2, ASIC2, ASTN2, ATP10B, ATP10D, ATP12A, ATP1A4, ATP1B3, ATP2C2, ATP5C1, ATP6V0E2, ATP6V1C2, ATP6V1G2, ATP8A1, ATP8A2, ATP8B1, ATP9A, ATP9B, ATRNL1, AVL9, B4GALT1, BA13, BBS9, BEST3, BMPR1B, BRI3BP, BTBD11, BTN3A1, BTN3A2, BTNL2, C1GALT1, C7, C8A, CACNA1A, CACNA2D1, CACNA2D3, CADM2, CAMK2D, CASQ2, CASR, CATSPERB, CD151, CD207, CDH10, CDH13, CDH23, CDH4, CDH9, CDHR2, CDKAL1, CDON, CHL1, CHRM2, CHRNA9, CHRN3, CHST11, CHST9, CLCA2, CLCNKB, CLDN1, CLDN10, CLDN14, CLDN20, CLEC12A, CLEC1A, CLEC1B, CLEC6A, CLECL1, CLIC5, CLSTN2, CMTM7, CMTM8, CNGA1, CNGA3, CNH3, CNR2, CNTN1, CNTN4, CNTN5, CNTNAP2, CNTNAP4, CNTNAP5, COL13A1, COL25A1, COLEC12, CORIN, COX16, COX7B2, CPLX1, CSMD1, CSMD2, CSMD3, CUBN, CUX1, CXADR, CXCL12, CYBRD1, CYP2C8, CYP2E1, CYP4F11, CYP4F12, CYP4F2, CYP4F3, CYP4F8, CYP4Z1, DAB2, DAD1, DBH, DCC, DCHS2, DDOST, DDR1, DERL3, DIO1, DLC1, DMBT1, DNER, DPP6, DPY19L4, DRAM1, DSCI1, DSCAM, DSG1, DYSF, ELFN2, ELOVL2, ELOVL6, ELTD1, EMCN, EMRI, EMR2, ENPP1, ENTPD1, EPB41L4A, EPHA7, EPHB1, ERAP1, ERAP2, ERBB4, ERO1LB, ERVFRD-1, ESYT2, EVC, EVC2, EXOC4, F2RL2, FAM155A, FAM163A, FAM173B, FAM189A1, FAM189A2, FARP1, FAS, FAT2, FAT3, FAT4, FCER2, FER, FER1L6, FGD5, FLT3, FLVCR1, FMO2, FMO5, FRAS1, FRMD3, FSHR, FUT9, FZD6, GABBR2, GABBR2, GABRG3, GABRR1, GALNT10, GALNT13, GALNT2, GALNT4, GALNT5, GALNTL6, GLDN, GLIPR1L2, GLRA3, GNB5, GOLM1, GPC5, GPC6, GPR111, GPR139, GPR158, GPR39, GPR65, GPR78, GRAMD1A, GRIA1, GRIA4, GRID2, GRIK2, GRIK3, GRIK4, GRIN2A, GRIN2B, GRIN3A, GRIP1, GRM4, GRM5, GRM7, GRM8, HHAT, HHLA2, HK1, HLA-A, HLA-B, HLA-C, HLA-DOA, HLA-DOB, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQA2, HLA-DQB1, HLA-DQB2, HLA-DRA, HLA-DRB1, HLA-DRB5, HLA-F, HLA-G, HMGCLL1, HPSE, HS3ST4, HS6ST3, IFI27L1, IGSF5, IL12RB2, IL1RL1, IL1RL2, INADL, INSR, ITGA1, ITGA11, ITGA2, ITGA9, ITGB3, ITGB5, ITGBL1, ITPR1, ITPR2, IYD, JKAMP, KANK1, KCNA6, KCNAB1, KCNB2, KCNH7, KCNJ12, KCNJ16, KCNK10, KCNK2, KCNMB1, KCNMB2, KCNMB3, KCNQ3, KCNQ4, KCNQ5, KIAA1024, KIAA1324L, KIAA1549, KIRREL3, KL, KLHL14, KLRB1, LAMP3, LAPTM4B, LARGE, LDLRAD3, LEMD2, LEPR, LGR5, LHCGR, LHFP, LHFPL2, LHFPL3, LINGO2, LOC100507421, LPGAT1, LPPR5, LRFN2, LRFN5, LRP1B, LRRK2, LRRK2, LRRTM4, LSAMP, LYN, LYPD6B, MAN1A1, MAN2A1, MARCH4, MCOLN2, MDGA2, MEGF11, MEF1B, MGAT1, MGAT5B, MGST3, MOXD1, MRS2, MS4A6E, MTCH1, MUC12, MUC22, MYO10, MYO1D, MYOF, NAALADL2, NALCN, NAV3, NCALD, NCAM2, NDST3, NDST4, NDUF12, NDUFB1, NDUFB10, NDUFB4, NEDD4, NETO1, NFASC, NIN2, NIPAL1, NIPAL3, NKAIN1, NKAIN3, NMUR1, NMUR2, NOTCH2, NOTCH4, NPHS2, NPSRI, NRCAM, NRG1, NRG3, NRP1, NRXN1, NRXN3, NTM, NTRK2, NTSR1, NUP210, NUP35, NUP88, OCA2, ODZ3, ODZ4, OMA1, OPCML, OPN4, OPRK1, OR10A1, OR10C1, OR12D2, OR13C2, OR13C5, OR14A16, OR1L8, OR1N2, OR1S1, OR2AK2, OR2B11, OR2J2, OR2L13, OR2T4, OR2W3, OR4C3, OR4C45, OR51B2, OR51B6, OR51D1, OR51E1, OR51F1, OR51I2, OR51M1, OR51Q1, OR51V1, OR52B6, OR52E2, OR52E4, OR52E6, OR52E8, OR52J3, OR52N2, OR52N4, OR52R1, OR5AC2, OR5F1, OR5I1, OR5P2, OR5W2, OR6N1, OR8G1, OR8G3, OR8H3, OR8I2, OR8U8, OR9G1, OR9G9, OTOP1, PCDH15, PCDH17, PCDHA1, PCDHA10, PCDHA11, PCDHA12, PCDHA13, PCDHA2, PCDHA3, PCDHA4, PCDHA5, PCDHA6, PCDHA7, PCDHA8, PCDHA9, PCDHAC1, PCNXL2, PCSK5, PCSK9, PDE3A, PDIA6, PEX5L, PGBD5, PI16, PIEZO1, PIEZO2, PIGG, PIGN, PIGP, PINK1, PKDL1, PKDL2, PKHD1, PKP2, PLA2G4A, PLA2G4C, PLA2R1, PLAU, PLD1, PLD5, PLEK, PLEKHH2, PLOD2, PLSCR1, PLXDC2, PLXNA4, PLXNC1, PNPLA3, PNPLA6, PPR1, PRICKLE2, PRKAB2, PRKCA, PROKR2, PRPH2, PTCHD3, PTGER3, PTPRB, PTPRD, PTPRF, PTPRG, PTPRM, PTPRQ, PTPRT, PTPRU, QRFPR, RAB27A, RAMP3, RAPGEF4, RASGRF2, RECK, RFTN1, RGS6, RGS7, RNF144B, RNF150, RNPEP, ROBO2, ROR1, ROR2, RYR1, RYR2, RYR3, SCARA5, SCARB1, SCD5, SCN10A, SCN1A, SCN3A, SCN3B, SCN9A, SCNN1G, SDC2, SDHA, SDK1, SEC11C, SEC24D, SEMA5A, SEMA6D, SERINC5, SGCG, SGCZ, SGPI1, SGMS1, SHISA2, SHISA6, SHISA9, SHROOM3, SIRPA, SLC10A2, SLC12A6, SLC12A8, SLC14A1, SLC14A2, SLC15A2, SLC15A5, SLC16A14, SLC17A5, SLC19A3, SLC1A2, SLC1A6, SLC22A16, SLC22A4, SLC22A5, SLC22A9, SLC24A4, SLC25A21, SLC25A25, SLC25A37, SLC25A38, SLC27A6, SLC28A1, SLC2A1, SLC2A14, SLC2A9, SLC30A9, SLC31A2, SLC35B3, SLC35D2, SLC35F3, SLC35F4, SLC37A1, SLC37A2, SLC38A4, SLC38A8, SLC38A9, SLC39A11, SLC39A14, SLC39A8, SLC41A3, SLC4A7, SLC5A12, SLC6A5, SLC7A7, SLC8A1, SLC8A3, SLC9A4, SLC9A8, SLC9A9, SLC9C1, SLC01B1, SLC01B3, SLC01C1, SLC05A1, SLC06A1, SNTB1, SNTG2, SNX16, SNX5, SOAT1, SORBS1, SORCS1, SORCS2, SORCS3, SPATA13, SPCS3, SPINK5, SPNS3, SPPL2C, SPRED1, SPTB, SPTLC3, SSRI, ST6GALNAC3, STS1A1, STS1A6, STEAP1B, STK39, STON2, STT3A, STX2, STXBP6, SYTK1, SV2C, SYK, SYNE1, SYNJ2, SYNJ2BP, SYNPR, SYT6, SYT9, TACSTD2, TAP1, TAP2, TAS1R2, TAS2R19, TAS2R20, TAS2R30, TEK, TESC, TGFB3, THSD7A, THSD7B, TKT, TM4SF4, TMC2, TMC3, TMC4, TMEM106B, TMEM108, TMEM117, TMEM128, TMEM132B, TMEM132C, TMEM132D, TMEM156, TMEM163, TMEM171, TMEM176A, TMEM176B, TMEM2, TMEM220, TMEM229B, TMEM244, TMEM44, TMEM51, TMEM63C, TMEM8A, TMPRSS15, TMPRSS9, TMT1, TMT2, TNFRSF11A, TNF, TOMM7, TPO, TRAM2, TRDN, TRPA1, TRPC4, TRPC6, TRPM3, TSHR, TSPAN15, TSPAN18, TSPAN2, TSPAN8, TSPAN9, UBR3, UGT1A10, UGT1A7, UGT1A8, UGT1A9, UGT2B7, UGT3A2, UNC5C, UNC93A, USH2A, UST, VNN1, VOPP1, VSTM4, VWF, WBSR17, WDR11, WLS, WWCI1, XKR6, XXYL1, XYLT1, XYLT2, YIPF1, ZDHHC13, ZDHHC14, ZDHHC7
Coated vesicle membrane	4.3×10^{-12}	63.9	HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1
Trans-Golgi network membrane	2.2×10^{-11}	26.0	HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQA2, HLA-DQB1, HLA-DQB2, HLA-DRA, HLA-DRB1, HLA-DRB5, KIF13A

GO categories in which false discovery rate is less than 0.01.

Table S24 continued.

Description	<i>p</i> -value	Enrichment	Genes
Integral to membrane	2.9×10^{-11}	1.3	AADAC, AADACL2, ABCA1, ABCA13, ABCA4, ABCB5, ABCC11, ABCC4, ABCG8, ABO, ACER1, ACPP, ADAMI2, ADAM28, ADAM29, ADCY3, ADCY5, ADCY8, ADRA1A, AIFM2, AJAP1, ALK, ALPL, ANK2, APP, AQP8, AQP9, AQPEP, ART3, ASAH2, ASGR2, ASIC2, ASTN2, ATP10B, ATP10D, ATP1A4, ATP2C2, ATP6V0E2, ATP8A1, ATP8A2, ATP8B1, ATP9A, ATP9B, ATRNL1, AVL9, B4GALT1, BAI3, BMPR1B, BRI3BP, BTBD11, BTN3A1, BTN3A2, BTNL2, C1GALT1, CACNA1A, CACNA2D3, CADM2, CASR, CD151, CD207, CDH10, CDH23, CDH4, CDH9, CDHR2, CDKAL1, CDON, CHLI, CHRM2, CHRN3, CHST11, CHST9, CLCA2, CLCNKB, CLDN1, CLDN10, CLDN14, CLDN20, CLEC12A, CLEC1A, CLEC1B, CLEC6A, CLECL1, CLSTN2, CMTM7, CMTM8, CNGA1, CNGA3, CNR2, CNTNAP2, CNTNAP4, CNTNAP5, COL13A1, COL25A1, COLEC12, CORIN, COX16, COX7B2, CSMD1, CSMD2, CSMD3, CUX1, CXADR, CYBRD1, CYP4F11, CYP4F12, CYP4F3, CYP4F8, CYP4Z1, DAD1, DBH, DCC, DCHS2, DDOST, DDI1, DERL3, DIO1, DNER, DPP6, DPY19L4, DRAM1, DSC1, DSCAM, DSG1, DYSF, ELFN2, ELOVL2, ELOVL6, ELTD1, EMCN, EMR1, EMR2, ENPP1, ENTPD1, EPHA7, EPHB1, ERAP1, ERAP2, ERBB4, ERVFRD-1, ESYT2, EVC, EVC2, F2RL2, FAM155A, FAM163A, FAM173B, FAM189A1, FAM189A2, FAS, FAT2, FAT3, FAT4, FCER2, FER1L6, FLT3, FLVCR1, FMO2, FMO5, FRAS1, FRMD3, FSHR, FUT9, FZD6, GABBR2, GABRR2, GABRG3, GABRR1, GALNT10, GALNT13, GALNT2, GALNT4, GALNTL5, GALNTL6, GLDN, GLIPR1L2, GLRA3, GOLM1, GPC5, GPC6, GPR111, GPR139, GPR158, GPR39, GPR65, GPR78, GRAMD1A, GRID2, GRIK2, GRIK3, GRIK4, GRIN2A, GRIN2B, GRIN3A, GRM4, GRM5, GRM7, GRM8, HHAT, HHLA2, HLA-A, HLA-B, HLA-C, HLA-DOA, HLA-DOB, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQA2, HLA-DQB1, HLA-DQB2, HLA-DRA, HLA-DRB1, HLA-DRB5, HLA-F, HLA-G, HS3ST4, HS6ST3, IFI27L1, IGSF5, IL12RB2, IL1RL1, IL1RL2, INSR, ITGB3, ITPR1, ITPR2, IYD, JKAMP, KCNAB1, KCNH7, KCNJ12, KCNK10, KCNMB2, KCNMB3, KIAA1024, KIAA1324L, KIAA1549, KIRREL3, KL, KLRB1, LAMP3, LAPTM4B, LARGE, LDLRAD3, LEMD2, LEPR, LGR5, LHCGR, LHFPL, LHFPL2, LHFPL3, LINGO2, LOC100507421, LP-GAT1, LPPR5, LRFN2, LRFN5, LRP1B, LRRC52, LRRTM4, MAN1A1, MAN2A1, MARCH4, MCOLN2, MEGF10, MEGF11, MEP1B, MGAT1, MGAT5B, MGST3, MOXD1, MRS2, MS4A6E, MTCHE1, MUC12, MUC22, MYOF, NAALADL2, NALCN, NCAM2, NDS3, NDS3T4, NDUFB1, NDUFB4, NETO1, NFASC, NINJ2, NIPAL1, NIPAL3, NKAIN1, NKAIN3, NMUR1, NMUR2, NOTCH2, NOTCH4, NPHS2, NPSR1, NRCAM, NRG1, NRG3, NRP1, NRXN1, NRXN3, NTRK2, NTSR1, OCA2, ODZ3, ODZ4, OMA1, OPCML, OPN4, OPRK1, OR10AG1, OR10C1, OR12D2, OR13C2, OR13C5, OR14A16, OR1L8, OR1N2, OR1S1, OR2AK2, OR2B11, OR2J2, OR2L13, OR2T4, OR2W3, OR4C3, OR4C45, OR51B2, OR51B6, OR51D1, OR51E1, OR51F1, OR51I2, OR51M1, OR51Q1, OR51V1, OR52B6, OR52E2, OR52E4, OR52E6, OR52E8, OR52J3, OR52N2, OR52N4, OR52R1, OR5AC2, OR5F1, OR5I1, OR5P2, OR5W2, OR6N1, OR8G1, OR8G5, OR8H3, OR8I2, OR8U8, OR9G1, OR9G9, OTOP1, PCDH15, PCDH17, PCDHA1, PCDHA10, PCDHA11, PCDHA12, PCDHA13, PCDHA2, PCDHA3, PCDHA4, PCDHA5, PCDHA6, PCDHA7, PCDHA8, PCDHA9, PCDHAC1, PCNXL2, PCSK5, PDE3A, PGBD5, PII6, PIEZO1, PIEZO2, PIGG, PIGN, PIGP, PINK1, PKD1L1, PKD1L2, PKHD1, PKP2, PLA2R1, PLAUR, PLD5, PLEKHH2, PLSCR1, PLXDC2, PLXNA4, PLXNC1, PN-PLA3, PNPLA6, PPYR1, PROKR2, PRPH2, PTCHD3, PTGER3, PTPRB, PTPRD, PT-PRF, PTPRG, PTPRM, PTPRQ, PTPRT, PTPRU, QRFPR, RAMP3, RNF144B, RNF150, ROBO2, ROR1, ROR2, RYR1, RYR3, SCARA5, SCARB1, SCD5, SCN1A, SCN3B, SCNN1G, SDC2, SDK1, SEC11C, SEMA5A, SEMA6D, SERINC5, SGGC, SGCZ, SGM51, SHISA2, SHISA6, SIRPA, SLC10A2, SLC12A6, SLC12A8, SLC14A1, SLC14A2, SLC15A2, SLC15A5, SLC16A14, SLC17A5, SLC19A3, SLC1A2, SLC1A6, SLC22A16, SLC22A4, SLC22A5, SLC22A9, SLC24A4, SLC25A21, SLC25A25, SLC25A37, SLC25A38, SLC27A6, SLC28A1, SLC2A1, SLC2A14, SLC2A9, SLC30A9, SLC31A2, SLC35B3, SLC35D2, SLC35F3, SLC35F4, SLC37A1, SLC37A2, SLC38A4, SLC38A8, SLC38A9, SLC39A11, SLC39A14, SLC39A8, SLC41A3, SLC4A7, SLC5A12, SLC6A5, SLC7A7, SLC8A1, SLC8A3, SLC9A4, SLC9A8, SLC9A9, SLC9C1, SLC01B1, SLC01B3, SLC01C1, SLC05A1, SLC06A1, SOAT1, SORCS1, SORCS2, SORCS3, SPCS3, SPNS3, SPPL2C, SPTLC3, SSR1, ST6GALNAC3, ST8SIA1, ST8SIA6, STEAP1B, STT3A, STX2, STXBP6, STYK1, SV2B, SV2C, SYNE1, SYNJ2BP, SYNPR, SYT6, SYT9, TACSTD2, TAPI, TAP2, TAS1R2, TAS2R19, TAS2R20, TAS2R30, TEK, TGFB3, THSD7A, THSD7B, TM4SF4, TMC2, TMCC3, TMCO4, TMEM106B, TMEM108, TMEM117, TMEM128, TMEM132B, TMEM132C, TMEM132D, TMEM156, TMEM163, TMEM17, TMEM176A, TMEM176B, TMEM2, TMEM220, TMEM229B, TMEM244, TMEM44, TMEM51, TMEM63C, TMEM8A, TMPRSS15, TMPRSS9, TMTC1, TMTC2, TNFRSF11A, TOMM7, TPO, TRAM2, TRDN, TRPA1, TRPC4, TRPC6, TRPM3, TSHR, TSPAN15, TSPAN18, TSPAN2, TSPAN8, TSPAN9, UBR3, UGT1A10, UGT1A7, UGT1A8, UGT1A9, UGT2B7, UGT3A2, UNC5C, UNC93A, USH2A, UST, VNN1, VOPPI, VSTM4, WBSRCR17, WDR11, WLS, XKR6, XXLYT1, XYLT1, XYLT2, YIPF1, ZDHHC13, ZDHHC14, ZDHHC7
Cytoplasmic vesicle part	3.0×10^{-11}	22.9	CPE, DMBT1, HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1

GO categories in which false discovery rate is less than 0.01.

Table S24 continued.

Description	p-value	Enrichment	Genes
Membrane	3.3×10^{-11}	1.3	AADAC, ABCA1, ABCA4, ABCB5, ABCC4, ABCG8, ABO, ACPP, ACTN1, ADAM12, ADAM28, ADCY3, ADCY5, ADCY8, ADD2, ADRA1A, AIFM2, AKAP12, AKAP13, AKAP6, ALDH18A1, ALPL, ALS2, AMPH, ANGPT1, ANGPT2, ANK2, ANK3, ANKS1B, ANO2, AP1S3, AP3B1, APBB1IP, APBB2, AQP8, ARHGAP24, ARHGEF18, ASAH2, ASAP1, ATP10D, ATP12A, ATP14A, ATP2C2, ATP5C1, ATP6V0E2, ATP8A1, ATP8B1, ATP9A, AVEN, B4GALT1, BAI3, BBS9, BCL2L14, BCR, BEST3, BICD1, BLNK, BMPRI1B, BNC2, BSPRY, BTN3A1, BTN3A2, C1GALT1, C3, C8A, CABS1, CACNA1A, CADM2, CADPS, CADPS2, CAMK2D, CAPI, CASQ2, CBFA2T3, CCDC88A, CCDC91, CD207, CDH10, CDH13, CDH23, CDH4, CDH9, CDKAL1, CHD1L, CHLI, CHR2, CHR9A9, CHRN3, CHST11, CHST9, CLDN10, CLDN14, CLEC12A, CLECL1, CLSTN2, CNGA3, CNIH3, CNR2, CNTN1, CNTN4, CNTN5, CNTNAP2, COG6, COL13A1, CORIN, CORO2B, CPE, CSMD2, CSMD3, CUBN, CUX1, CXADR, CYB5R2, CYBRD1, CYP2C8, CYP2E1, CYP4F11, CYP4F12, CYP4F2, CYP4F3, CYP4F8, CYP4Z1, DAAMI, DAB2, DAD1, DAPP1, DCC, DCHS2, DGKB, DGKH, DIO1, DISC1, DLG2, DLGAP1, DMBT1, DNAAF1, DNER, DNML1, DOCK1, DOCK4, DOPEY2, DRAM1, DSC1, DSCAM, DSG1, DTNA, DYM, DYNC2H1, DYSF, DYTIN, ELMO1, ELOVL2, ELOVL6, ELTD1, EMID2, EMR2, ENDOU, ENPP1, EPHA7, EPHB1, ERAP1, ERAP2, ERBB4, ERC2, ERO1LB, ERVFRD-1, ESYT2, EXOC2, EXOC4, F2RL2, F5, FABP2, FAS, FAT2, FAT3, FAT4, FHIT, FLVCR1, FMN1, FMO2, FNDC1, FRAS1, FRMPD1, FSHR, FUT9, FZD6, GABBR2, GABRR2, GABRR1, GALNT10, GALNT13, GALNT2, GALNT4, GALNTL5, GAS2, GLDN, GPC5, GPC6, GPR111, GPR139, GPR158, GPR39, GPR65, GPR78, GRB10, GRIA1, GRID2, GRIK2, GRIK3, GRIK4, GRIN2A, GRIN2B, GRIN3A, GRIP1, GRIP2, GRM5, GRM7, GRM8, GUCA1A, HAAO, HHAT, HIP1, HK1, HLA-A, HLA-B, HLA-C, HLA-DOA, HLA-DOB, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQA2, HLA-DQB1, HLA-DQB2, HLA-DRA, HLA-DRB1, HLA-DRB5, HLA-F, HLA-G, HMGCLL1, HPSE2, HS3ST4, IGSF5, INADL, INPP5D, ITGA1, ITGA2, ITGA9, ITGB3, ITGB5, ITPR2, IYD, JKAMP, KAZN, KCNA6, KCNAB1, KCNAB2, KCNAB3, KCNAB4, KCNAB5, KCNAB6, KCNAB7, KCNAB8, KCNAB9, KCNAB10, KCNAB11, KCNAB12, KCNAB13, KCNAB14, KCNAB15, KCNAB16, KCNAB17, KCNAB18, KCNAB19, KCNAB20, KCNAB21, KCNAB22, KCNAB23, KCNAB24, KCNAB25, KCNAB26, KCNAB27, KCNAB28, KCNAB29, KCNAB30, KCNAB31, KCNAB32, KCNAB33, KCNAB34, KCNAB35, KCNAB36, KCNAB37, KCNAB38, KCNAB39, KCNAB40, KCNAB41, KCNAB42, KCNAB43, KCNAB44, KCNAB45, KCNAB46, KCNAB47, KCNAB48, KCNAB49, KCNAB50, KCNAB51, KCNAB52, KCNAB53, KCNAB54, KCNAB55, KCNAB56, KCNAB57, KCNAB58, KCNAB59, KCNAB60, KCNAB61, KCNAB62, KCNAB63, KCNAB64, KCNAB65, KCNAB66, KCNAB67, KCNAB68, KCNAB69, KCNAB70, KCNAB71, KCNAB72, KCNAB73, KCNAB74, KCNAB75, KCNAB76, KCNAB77, KCNAB78, KCNAB79, KCNAB80, KCNAB81, KCNAB82, KCNAB83, KCNAB84, KCNAB85, KCNAB86, KCNAB87, KCNAB88, KCNAB89, KCNAB90, KCNAB91, KCNAB92, KCNAB93, KCNAB94, KCNAB95, KCNAB96, KCNAB97, KCNAB98, KCNAB99, KCNAB100, KCNAB101, KCNAB102, KCNAB103, KCNAB104, KCNAB105, KCNAB106, KCNAB107, KCNAB108, KCNAB109, KCNAB110, KCNAB111, KCNAB112, KCNAB113, KCNAB114, KCNAB115, KCNAB116, KCNAB117, KCNAB118, KCNAB119, KCNAB120, KCNAB121, KCNAB122, KCNAB123, KCNAB124, KCNAB125, KCNAB126, KCNAB127, KCNAB128, KCNAB129, KCNAB130, KCNAB131, KCNAB132, KCNAB133, KCNAB134, KCNAB135, KCNAB136, KCNAB137, KCNAB138, KCNAB139, KCNAB140, KCNAB141, KCNAB142, KCNAB143, KCNAB144, KCNAB145, KCNAB146, KCNAB147, KCNAB148, KCNAB149, KCNAB150, KCNAB151, KCNAB152, KCNAB153, KCNAB154, KCNAB155, KCNAB156, KCNAB157, KCNAB158, KCNAB159, KCNAB160, KCNAB161, KCNAB162, KCNAB163, KCNAB164, KCNAB165, KCNAB166, KCNAB167, KCNAB168, KCNAB169, KCNAB170, KCNAB171, KCNAB172, KCNAB173, KCNAB174, KCNAB175, KCNAB176, KCNAB177, KCNAB178, KCNAB179, KCNAB180, KCNAB181, KCNAB182, KCNAB183, KCNAB184, KCNAB185, KCNAB186, KCNAB187, KCNAB188, KCNAB189, KCNAB190, KCNAB191, KCNAB192, KCNAB193, KCNAB194, KCNAB195, KCNAB196, KCNAB197, KCNAB198, KCNAB199, KCNAB200, KCNAB201, KCNAB202, KCNAB203, KCNAB204, KCNAB205, KCNAB206, KCNAB207, KCNAB208, KCNAB209, KCNAB210, KCNAB211, KCNAB212, KCNAB213, KCNAB214, KCNAB215, KCNAB216, KCNAB217, KCNAB218, KCNAB219, KCNAB220, KCNAB221, KCNAB222, KCNAB223, KCNAB224, KCNAB225, KCNAB226, KCNAB227, KCNAB228, KCNAB229, KCNAB230, KCNAB231, KCNAB232, KCNAB233, KCNAB234, KCNAB235, KCNAB236, KCNAB237, KCNAB238, KCNAB239, KCNAB240, KCNAB241, KCNAB242, KCNAB243, KCNAB244, KCNAB245, KCNAB246, KCNAB247, KCNAB248, KCNAB249, KCNAB250, KCNAB251, KCNAB252, KCNAB253, KCNAB254, KCNAB255, KCNAB256, KCNAB257, KCNAB258, KCNAB259, KCNAB260, KCNAB261, KCNAB262, KCNAB263, KCNAB264, KCNAB265, KCNAB266, KCNAB267, KCNAB268, KCNAB269, KCNAB270, KCNAB271, KCNAB272, KCNAB273, KCNAB274, KCNAB275, KCNAB276, KCNAB277, KCNAB278, KCNAB279, KCNAB280, KCNAB281, KCNAB282, KCNAB283, KCNAB284, KCNAB285, KCNAB286, KCNAB287, KCNAB288, KCNAB289, KCNAB290, KCNAB291, KCNAB292, KCNAB293, KCNAB294, KCNAB295, KCNAB296, KCNAB297, KCNAB298, KCNAB299, KCNAB300, KCNAB301, KCNAB302, KCNAB303, KCNAB304, KCNAB305, KCNAB306, KCNAB307, KCNAB308, KCNAB309, KCNAB310, KCNAB311, KCNAB312, KCNAB313, KCNAB314, KCNAB315, KCNAB316, KCNAB317, KCNAB318, KCNAB319, KCNAB320, KCNAB321, KCNAB322, KCNAB323, KCNAB324, KCNAB325, KCNAB326, KCNAB327, KCNAB328, KCNAB329, KCNAB330, KCNAB331, KCNAB332, KCNAB333, KCNAB334, KCNAB335, KCNAB336, KCNAB337, KCNAB338, KCNAB339, KCNAB340, KCNAB341, KCNAB342, KCNAB343, KCNAB344, KCNAB345, KCNAB346, KCNAB347, KCNAB348, KCNAB349, KCNAB350, KCNAB351, KCNAB352, KCNAB353, KCNAB354, KCNAB355, KCNAB356, KCNAB357, KCNAB358, KCNAB359, KCNAB360, KCNAB361, KCNAB362, KCNAB363, KCNAB364, KCNAB365, KCNAB366, KCNAB367, KCNAB368, KCNAB369, KCNAB370, KCNAB371, KCNAB372, KCNAB373, KCNAB374, KCNAB375, KCNAB376, KCNAB377, KCNAB378, KCNAB379, KCNAB380, KCNAB381, KCNAB382, KCNAB383, KCNAB384, KCNAB385, KCNAB386, KCNAB387, KCNAB388, KCNAB389, KCNAB390, KCNAB391, KCNAB392, KCNAB393, KCNAB394, KCNAB395, KCNAB396, KCNAB397, KCNAB398, KCNAB399, KCNAB400, KCNAB401, KCNAB402, KCNAB403, KCNAB404, KCNAB405, KCNAB406, KCNAB407, KCNAB408, KCNAB409, KCNAB410, KCNAB411, KCNAB412, KCNAB413, KCNAB414, KCNAB415, KCNAB416, KCNAB417, KCNAB418, KCNAB419, KCNAB420, KCNAB421, KCNAB422, KCNAB423, KCNAB424, KCNAB425, KCNAB426, KCNAB427, KCNAB428, KCNAB429, KCNAB430, KCNAB431, KCNAB432, KCNAB433, KCNAB434, KCNAB435, KCNAB436, KCNAB437, KCNAB438, KCNAB439, KCNAB440, KCNAB441, KCNAB442, KCNAB443, KCNAB444, KCNAB445, KCNAB446, KCNAB447, KCNAB448, KCNAB449, KCNAB450, KCNAB451, KCNAB452, KCNAB453, KCNAB454, KCNAB455, KCNAB456, KCNAB457, KCNAB458, KCNAB459, KCNAB460, KCNAB461, KCNAB462, KCNAB463, KCNAB464, KCNAB465, KCNAB466, KCNAB467, KCNAB468, KCNAB469, KCNAB470, KCNAB471, KCNAB472, KCNAB473, KCNAB474, KCNAB475, KCNAB476, KCNAB477, KCNAB478, KCNAB479, KCNAB480, KCNAB481, KCNAB482, KCNAB483, KCNAB484, KCNAB485, KCNAB486, KCNAB487, KCNAB488, KCNAB489, KCNAB490, KCNAB491, KCNAB492, KCNAB493, KCNAB494, KCNAB495, KCNAB496, KCNAB497, KCNAB498, KCNAB499, KCNAB500, KCNAB501, KCNAB502, KCNAB503, KCNAB504, KCNAB505, KCNAB506, KCNAB507, KCNAB508, KCNAB509, KCNAB510, KCNAB511, KCNAB512, KCNAB513, KCNAB514, KCNAB515, KCNAB516, KCNAB517, KCNAB518, KCNAB519, KCNAB520, KCNAB521, KCNAB522, KCNAB523, KCNAB524, KCNAB525, KCNAB526, KCNAB527, KCNAB528, KCNAB529, KCNAB530, KCNAB531, KCNAB532, KCNAB533, KCNAB534, KCNAB535, KCNAB536, KCNAB537, KCNAB538, KCNAB539, KCNAB540, KCNAB541, KCNAB542, KCNAB543, KCNAB544, KCNAB545, KCNAB546, KCNAB547, KCNAB548, KCNAB549, KCNAB550, KCNAB551, KCNAB552, KCNAB553, KCNAB554, KCNAB555, KCNAB556, KCNAB557, KCNAB558, KCNAB559, KCNAB560, KCNAB561, KCNAB562, KCNAB563, KCNAB564, KCNAB565, KCNAB566, KCNAB567, KCNAB568, KCNAB569, KCNAB570, KCNAB571, KCNAB572, KCNAB573, KCNAB574, KCNAB575, KCNAB576, KCNAB577, KCNAB578, KCNAB579, KCNAB580, KCNAB581, KCNAB582, KCNAB583, KCNAB584, KCNAB585, KCNAB586, KCNAB587, KCNAB588, KCNAB589, KCNAB590, KCNAB591, KCNAB592, KCNAB593, KCNAB594, KCNAB595, KCNAB596, KCNAB597, KCNAB598, KCNAB599, KCNAB600, KCNAB601, KCNAB602, KCNAB603, KCNAB604, KCNAB605, KCNAB606, KCNAB607, KCNAB608, KCNAB609, KCNAB610, KCNAB611, KCNAB612, KCNAB613, KCNAB614, KCNAB615, KCNAB616, KCNAB617, KCNAB618, KCNAB619, KCNAB620, KCNAB621, KCNAB622, KCNAB623, KCNAB624, KCNAB625, KCNAB626, KCNAB627, KCNAB628, KCNAB629, KCNAB630, KCNAB631, KCNAB632, KCNAB633, KCNAB634, KCNAB635, KCNAB636, KCNAB637, KCNAB638, KCNAB639, KCNAB640, KCNAB641, KCNAB642, KCNAB643, KCNAB644, KCNAB645, KCNAB646, KCNAB647, KCNAB648, KCNAB649, KCNAB650, KCNAB651, KCNAB652, KCNAB653, KCNAB654, KCNAB655, KCNAB656, KCNAB657, KCNAB658, KCNAB659, KCNAB660, KCNAB661, KCNAB662, KCNAB663, KCNAB664, KCNAB665, KCNAB666, KCNAB667, KCNAB668, KCNAB669, KCNAB670, KCNAB671, KCNAB672, KCNAB673, KCNAB674, KCNAB675, KCNAB676, KCNAB677, KCNAB678, KCNAB679, KCNAB680, KCNAB681, KCNAB682, KCNAB683, KCNAB684, KCNAB685, KCNAB686, KCNAB687, KCNAB688, KCNAB689, KCNAB690, KCNAB691, KCNAB692, KCNAB693, KCNAB694, KCNAB695, KCNAB696, KCNAB697, KCNAB698, KCNAB699, KCNAB700, KCNAB701, KCNAB702, KCNAB703, KCNAB704, KCNAB705, KCNAB706, KCNAB707, KCNAB708, KCNAB709, KCNAB710, KCNAB711, KCNAB712, KCNAB713, KCNAB714, KCNAB715, KCNAB716, KCNAB717, KCNAB718, KCNAB719, KCNAB720, KCNAB721, KCNAB722, KCNAB723, KCNAB724, KCNAB725, KCNAB726, KCNAB727, KCNAB728, KCNAB729, KCNAB730, KCNAB731, KCNAB732, KCNAB733, KCNAB734, KCNAB735, KCNAB736, KCNAB737, KCNAB738, KCNAB739, KCNAB740, KCNAB741, KCNAB742, KCNAB743, KCNAB744, KCNAB745, KCNAB746, KCNAB747, KCNAB748, KCNAB749, KCNAB750, KCNAB751, KCNAB752, KCNAB753, KCNAB754, KCNAB755, KCNAB756, KCNAB757, KCNAB758, KCNAB759, KCNAB760, KCNAB761, KCNAB762, KCNAB763, KCNAB764, KCNAB765, KCNAB766, KCNAB767, KCNAB768, KCNAB769, KCNAB770, KCNAB771, KCNAB772, KCNAB773, KCNAB774, KCNAB775, KCNAB776, KCNAB777, KCNAB778, KCNAB779, KCNAB780, KCNAB781, KCNAB782, KCNAB783, KCNAB784, KCNAB785, KCNAB786, KCNAB787, KCNAB788, KCNAB789, KCNAB790, KCNAB791, KCNAB792, KCNAB793, KCNAB794, KCNAB795, KCNAB796, KCNAB797, KCNAB798, KCNAB799, KCNAB800, KCNAB801, KCNAB802, KCNAB803, KCNAB804, KCNAB805, KCNAB806, KCNAB807, KCNAB808, KCNAB809, KCNAB810, KCNAB811, KCNAB812, KCNAB813, KCNAB814, KCNAB815, KCNAB816, KCNAB817, KCNAB818, KCNAB819, KCNAB820, KCNAB821, KCNAB822, KCNAB823, KCNAB824, KCNAB825, KCNAB826, KCNAB827, KCNAB828, KCNAB829, KCNAB830, KCNAB831, KCNAB832, KCNAB833, KCNAB834, KCNAB835, KCNAB836, KCNAB837, KCNAB838, KCNAB839, KCNAB840, KCNAB841, KCNAB842, KCNAB843, KCNAB844, KCNAB845, KCNAB846, KCNAB847, KCNAB848, KCNAB849, KCNAB850, KCNAB851, KCNAB852, KCNAB853, KCNAB854, KCNAB855, KCNAB856, KCNAB857, KCNAB858, KCNAB859, KCNAB860, KCNAB861, KCNAB862, KCNAB863, KCNAB864, KCNAB865, KCNAB866, KCNAB867, KCNAB868, KCNAB869, KCNAB870, KCNAB871, KCNAB872, KCNAB873, KCNAB874, KCNAB875, KCNAB876, KCNAB877, KCNAB878, KCNAB879, KCNAB880, KCNAB881, KCNAB882, KCNAB883, KCNAB884, KCNAB885, KCNAB886, KCNAB887, KCNAB888, KCNAB889, KCNAB890, KCNAB891, KCNAB892, KCNAB893, KCNAB894, KCNAB895, KCNAB896, KCNAB897, KCNAB898, KCNAB899, KCNAB900, KCNAB901, KCNAB902, KCNAB903, KCNAB904, KCNAB905, KCNAB906, KCNAB907, KCNAB908, KCNAB909, KCNAB910, KCNAB911, KCNAB912, KCNAB913, KCNAB914, KCNAB915, KCNAB916, KCNAB917, KCNAB918, KCNAB919, KCNAB920, KCNAB921, KCNAB922, KCNAB923, KCNAB924, KCNAB925, KCNAB926, KCNAB927, KCNAB928, KCNAB929, KCNAB930, KCNAB931, KCNAB932, KCNAB933, KCNAB934, KCNAB935, KCNAB936, KCNAB937, KCNAB938, KCNAB939, KCNAB940, KCNAB941, KCNAB942, KCNAB943, KCNAB944, KCNAB945, KCNAB946, KCNAB947, KCNAB948, KCNAB949, KCNAB950, KCNAB951, KCNAB952, KCNAB953, KCNAB954, KCNAB955, KCNAB956, KCNAB957, KCNAB958, KCNAB959, KCNAB960, KCNAB961, KCNAB962, KCNAB963, KCNAB964, KCNAB965, KCNAB966, KCNAB967, KCNAB968, KCNAB969, KCNAB970, KCNAB971, KCNAB972, KCNAB973, KCNAB974, KCNAB975, KCNAB976, KCNAB977, KCNAB978, KCNAB979, KCNAB980, KCNAB981, KCNAB982, KCNAB983, KCNAB984, KCNAB985, KCNAB986, KCNAB987, KCNAB988, KCNAB989, KCNAB990, KCNAB991, KCNAB992, KCNAB993, KCNAB994, KCNAB995, KCNAB996, KCNAB997, KCNAB998, KCNAB999, KCNAB1000, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRA, HLA-DRB1, HLA-DRB5
Clathrin-coated endocytic vesicle membrane	3.3×10^{-11}	74.8	HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRA, HLA-DRB1, HLA-DRB5

GO categories in which false discovery rate is less than 0.01.

Table S24 continued.

Description	p-value	Enrichment	Genes
Intrinsic to membrane	5.7×10^{-11}	1.3	AADAC, AADACL2, ABCA1, ABCA13, ABCA4, ABCB5, ABCC11, ABCC4, ABCG8, ABO, ACER1, ACPP, ADAMI2, ADAM28, ADAM29, ADCY3, ADCY5, ADCY8, ADRA1A, AIFM2, AJAPI, ALK, ALPL, ANK2, APP, AQP8, AQP9, AQPEP, ART3, ASAH2, ASGR2, ASIC2, ASTN2, ATP10B, ATP10D, ATP1A4, ATP2C2, ATP6V0E2, ATP8A1, ATP8A2, ATP8B1, ATP9A, ATP9B, ATRNL1, AVL9, B4GALT1, BAI3, BMPR1B, BRI3BP, BTBD11, BTN3A1, BTN3A2, BTNL2, C1GALT1, CACNA1A, CACNA2D3, CADM2, CASR, CD151, CD207, CDH10, CDH13, CDH23, CDH4, CDH9, CDHR2, CDKALI, CDON, CHL1, CHRM2, CHRN3, CHST11, CHST9, CLCA2, CLCNKB, CLDN1, CLDN10, CLDN14, CLDN20, CLEC12A, CLEC1A, CLEC1B, CLEC6A, CLECL1, CLSTN2, CMTM7, CMTM8, CNGA1, CNGA3, CNR2, CNTN1, CNTN4, CNTN5, CNTNAP2, CNTNAP4, CNTNAP5, COL13A1, COL25A1, COLEC12, CORIN, COX16, COX7B2, CSMD1, CSMD2, CSMD3, CUX1, CXADR, CYBRD1, CYP2E1, CYP4F11, CYP4F12, CYP4F3, CYP4F8, CYP4Z1, DAD1, DBH, DCC, DCHS2, DDOST, DDR1, DERL3, DIO1, DNER, DPP6, DPY19L4, DRAM1, DSCI, DSCAM, DSG1, DYSF, ELFN2, ELOVL2, ELOVL6, ELTD1, EMCN, EMR1, EMR2, ENPP1, ENTPD1, EPHA7, EPHB1, ERAP1, ERAP2, ERBB4, ERVFRD-1, ESYT2, EVC, EVC2, F2RL2, FAM155A, FAM163A, FAM173B, FAM189A1, FAM189A2, FAS, FAT2, FAT3, FAT4, FCER2, FER1L6, FLT3, FLVCR1, FMO2, FMO5, FRAS1, FRMD3, FSHR, FUT9, FZD6, GABBR2, GABRB2, GABRG3, GABRR1, GALNT10, GALNT13, GALNT2, GALNTL4, GALNTL5, GALNTL6, GLDN, GLIPRIL2, GLRA3, GOLM1, GPC5, GPC6, GPR111, GPR139, GPR158, GPR39, GPR65, GPR78, GRAMD1A, GRID2, GRIK2, GRIK3, GRIK4, GRIN2A, GRIN2B, GRIN3A, GRM4, GRM5, GRM7, GRM8, HHAT, HHLA2, HLA-A, HLA-B, HLA-C, HLA-DOA, HLA-DOB, HLA-DPA1, HLA-DPBI, HLA-DQA1, HLA-DQA2, HLA-DQB1, HLA-DQB2, HLA-DRA, HLA-DRB1, HLA-DRB5, HLA-F, HLA-G, HS3ST4, HS6ST3, IFI27L1, IGSF5, IL12RB2, IL1RL1, IL1RL2, INSR, ITGB3, ITPR1, ITPR2, IYD, JKAMP, KCNAB1, KCNH7, KCNJ12, KCNK10, KCNMB2, KCNMB3, KIAA1024, KIAA1324L, KIAA1549, KIRREL3, KL, KLRB1, LAMP3, LAPTM4B, LARGE, LDLRAD3, LEMD2, LEPR, LGR5, LHCGR, LHFP, LHFPL2, LHFPL3, LINGO2, LOC100507421, LPGATI, LPPR1, LRFN2, LRFN5, LRP1B, LRRC52, LRRTM4, LSAMP, LYPD6B, MAN1A1, MAN2A1, MARCH4, MCOLN2, MDGA2, MEGF10, MEGF11, MEP1B, MGAT1, MGAT5B, MGS3, MOXD1, MR52, MS4A6E, MTH1, MUC12, MUC22, MYOF, NAALADL2, NALCN, NCAM2, NDST3, NDST4, NDUFBI, NDUFB4, NETO1, NFASC, NINJ2, NIPAL1, NIPAL3, NKAIN1, NKAIN3, NMUR1, NMUR2, NOTCH2, NOTCH4, NPHS2, NPSR1, NRCAM, NRG1, NRG3, NRPI, NRXN1, NRXN3, NTM, NTRK2, NTSR1, OCA2, ODZ3, ODZA, OMA1, OPCML, OPN4, OPRK1, OR10A1, OR10C1, OR12D2, OR13C2, OR13C5, OR14A16, OR1L8, OR1N2, OR1S1, OR2AK2, OR2B11, OR2J2, OR2L13, OR2T4, OR2W3, OR4C3, OR4C45, OR51B2, OR51B6, OR51D1, OR51E1, OR51F1, OR51I2, OR51M1, OR51Q1, OR51V1, OR52B6, OR52E2, OR52E4, OR52E6, OR52E8, OR52J3, OR52N2, OR52N4, OR52R1, OR5AC2, OR5F1, OR5I1, OR5P2, OR5W2, OR6N1, OR8G1, OR8G5, OR8H3, OR8I2, OR8U8, OR9G1, OR9G9, OTOPI, PCDH15, PCDH17, PCDHA1, PCDHA10, PCDHA11, PCDHA12, PCDHA13, PCDHA2, PCDHA3, PCDHA4, PCDHA5, PCDHA6, PCDHA7, PCDHA8, PCDHA9, PCDHAC1, PCNXL2, PCSK5, PDE3A, PGBD5, PII6, PIEZO1, PIEZO2, PIGG, PIGN, PIGP, PINK1, PKD1L1, PKD1L2, PKHD1, PKP2, PLA2R1, PLAUR, PLD5, PLEKHH2, PLSCR1, PLXDC2, PLXNA4, PLXNC1, PNPLA3, PNPLA6, PPYR1, PROKR2, PRPH2, PTCHD3, PTGER3, PTPRB, PTPRD, PTPRF, PTPRG, PTPRM, PTPRQ, PTPRT, PTPRU, QRFRP, RAMP3, RECK, RNF144B, RNF150, ROBO2, ROR1, ROR2, RYR1, RYR3, SCARA5, SCARB1, SCD5, SCN1A, SCN3B, SCNN1G, SDC2, SDK1, SEC11C, SEMA5A, SEMA6D, SERINC5, SGCG, SG CZ, SGMS1, SHISA2, SHISA6, SIRPA, SLC10A2, SLC12A6, SLC12A8, SLC14A1, SLC14A2, SLC15A2, SLC15A5, SLC16A14, SLC17A5, SLC19A3, SLC1A2, SLC1A6, SLC22A16, SLC22A4, SLC22A5, SLC22A9, SLC24A4, SLC25A21, SLC25A25, SLC25A37, SLC25A38, SLC27A6, SLC28A1, SLC2A1, SLC2A14, SLC2A9, SLC30A9, SLC31A2, SLC35B3, SLC35D2, SLC35F3, SLC35F4, SLC37A1, SLC37A2, SLC38A4, SLC38A8, SLC38A9, SLC39A11, SLC39A14, SLC39A8, SLC41A3, SLC4A7, SLC5A12, SLC6A5, SLC7A7, SLC8A1, SLC8A3, SLC9A4, SLC9A8, SLC9A9, SLC9C1, SLC01B1, SLC01B3, SLC01C1, SLC05A1, SLC06A1, SOAT1, SORCS1, SORCS2, SORCS3, SPCS3, SPNS3, SPPL2C, SPTB, SPTLC3, SSRI, ST6GALNAC3, ST8SIA1, ST8SIA6, STEAP1B, STT3A, STX2, STXBP6, STYK1, SV2B, SV2C, SYNE1, SYNJ2BP, SYNPR, SYT6, SYT9, TACSTD2, TAPI, TAP2, TAS1R2, TAS2R19, TAS2R20, TAS2R30, TEK, TGFBR3, THSD7A, THSD7B, TM4SF4, TMC2, TMCC3, TMC04, TMEM106B, TMEM108, TMEM117, TMEM128, TMEM132B, TMEM132C, TMEM132D, TMEM156, TMEM163, TMEM17, TMEM176A, TMEM176B, TMEM2, TMEM220, TMEM229B, TMEM244, TMEM44, TMEM51, TMEM63C, TMEM8A, TMPRSS15, TMPRSS9, TMTC1, TMTC2, TNFRSF11A, TOMM7, TPO, TRAM2, TRDN, TRPA1, TRPC4, TRPC6, TRPM3, TSHR, TSPAN15, TSPAN18, TSPAN2, TSPAN8, TSPAN9, UBR3, UGT1A10, UGT1A7, UGT1A8, UGT1A9, UGT2B7, UGT3A2, UNC5C, UNC93A, USH2A, UST, VNN1, VOPP1, VSTM4, WBSR17, WDR11, WLS, XKR6, XXYLT1, XYLT1, XYLT2, YIPF1, ZDHHC13, ZDHHC14, ZDHHC7
Integral to organelle membrane	7.9×10^{-11}	38.8	HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPBI, HLA-DQA1, HLA-DQB1, HLA-DRB1
Intrinsic to organelle membrane	2.3×10^{-10}	34.7	HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPBI, HLA-DQA1, HLA-DQB1, HLA-DRB1
Cell junction	5.6×10^{-10}	1.8	ABCB5, ABII, ACTN1, ACTN2, AFAP1, AJAPI, AMPH, AMTN, ANK2, ANK3, ANKS1B, APBB1IP, ARHGAP24, ARHGEF18, B4GALT1, BSPRY, CADM2, CADP5, CADP2, CCDC85C, CDC42BPA, CDHR2, CDSN, CGNLI, CHRM2, CHRNA9, CHRN3, CLCA2, CLDN1, CLDN10, CLDN14, CLDN20, CNH3, COL13A1, CTNNA3, CXADR, DISC1, DLCI, DLG2, DLGAP1, DSCI, DSG1, DTNA, EGFLAM, ERC2, FAT2, FER, FMN1, FNDC1, FRMD4A, GABBR2, GABRB2, GABRG3, GABRR1, GLRA3, GRIA1, GRIA4, GRID2, GRIK2, GRIK3, GRIK4, GRIN2A, GRIN2B, GRIN3A, GRIP1, IGSF5, INADL, IQSECI, ITGB5, KAZN, KIFC3, LAMA1, LPP, LRFN2, LRRC7, LRRTM4, MAGI1, MAGI2, NCS1, NETO1, NFASC, NFIA, NPHS2, NRXN1, PALLD, PARD3, PARD3B, PARVB, PCLO, PDZD2, PHACTR1, PKP1, PKP2, PLEKHA7, POLR1E, PSD3, PTPRM, PTPRU, RIMBP2, RIMS1, RIMS2, SCN1A, SEPT11, SHISA9, SHROOM3, SLC2A1, SLC8A1, SNCA, SNTB1, SORBS1, STX2, SV2B, SV2C, SVIL, SYN3, SYNPR, SYT6, SYT9, TANC1, TEK, TES, TIAMI, TJP2, TMEM163, TNS1, TRIM9, TRPC4, TRPC6, UNC13A, UNC13C

GO categories in which false discovery rate is less than 0.01.

Table S24 continued.

Description	<i>p</i> -value	Enrichment	Genes
Plasma membrane part	2.5×10^{-9}	1.7	ABCA1, ABCA4, ABCB5, ABCG8, ADCY3, ADRA1A, ALK, ANK2, ANK3, ART3, ASIC2, BMPR1B, CACNA1A, CASQ2, CATSPERB, CDH13, CDH4, CHRNB3, CLCNKB, CLEC1A, CLEC1B, CNR2, CNTNAP2, CUBN, CYBRD1, CYP4F12, DAB2, DCC, DLC1, DSCAM, DSG1, DYSF, EMR1, ERBB4, EVC, EVC2, FAS, FCER2, FGD5, FLVCR1, GABRR1, GPC5, GPC6, GRIA1, GRIK2, GRIK3, GRIN2A, GRM5, HLA-A, HLA-B, HLA-C, HLA-DOA, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQA2, HLA-DQB1, HLA-DQB2, HLA-DRA, HLA-DRB1, HLA-DRB5, HLA-F, HLA-G, IL1RL2, INADL, ITGA1, ITGBL1, KANK1, KCNK2, KCNMB3, KCNQ5, KL, LHCGR, MEGF11, MUC12, MYO10, MYOF, NEDD4, NOTCH4, NRCAM, NRG1, NRG3, NRXN1, NRXN3, OPCML, OPRK1, PCDHA1, PCDHA10, PCDHA11, PCDHA2, PCDHA3, PCDHA4, PCDHA5, PCDHA6, PCDHA7, PCDHA8, PCDHAC1, PCSK9, PKHD1, PLEK, PLSCR1, PPYR1, PRKAB2, PTGER3, PTPRB, PTPRD, PTPRM, RAMP3, RAPGEF4, RGS6, ROBO2, ROR1, SCARB1, SCN1A, SCNN1G, SGCG, SGCZ, SLC12A6, SLC15A2, SLC17A5, SLC1A2, SLC2A9, SLC5A12, SLC9C1, SLC01B1, SLC01B3, SNTB1, SNTG2, SPATA13, SPRED1, SPTB, STK39, SYK, TEK, TMEM17, TNFRSF11A, TPO, TRPC4, TSHR, TSPAN9, VWF
Cell projection part	3.2×10^{-9}	1.9	ABII, ACTN2, ALS2, AMPH, ANK3, ANKS1B, APBB2, ATP8B1, BBS9, CDH23, CHRM2, CNH3, CNTNAP2, CUBN, CXADR, CYBRD1, DCC, DISC1, DLG2, DLGAP1, DNAAF1, DNAH11, DNAH12, DNAH17, DNAH3, DNAH5, DNAH8, DSCAM, DYNC2H1, EMR2, ERBB4, ERC2, EVC, EVC2, EXOC4, FGD5, FOPNL, FSCB, FZD6, GRIA1, GRID2, GRIK2, GRIK3, GRIK4, GRIN2A, GRIN2B, GRIN3A, GRM5, GRM7, IFT57, KANK1, KCNQ3, KIRREL3, LRRK2, LRRK2, MAGI2, MAP2, MAPT, MBP, MYO10, MYO5A, MYO5B, NETO1, NFASC, NGEF, NRCAM, NRP1, NRXN1, ODF1, PACRG, PKD1L1, PKHD1, PLCB4, PLEK, PSD3, RAPGEF4, ROBO2, SCARB1, SCN1A, SEPT11, SLC1A2, SLC22A5, SLC9C1, SNCA, SPAG16, SPATA13, SYNJ2, TANC1, TEKT4, TESC, TIAM2, TMEM17, TLL11, USH2A, WWC1
Endosome membrane	4.2×10^{-9}	24.1	HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1
Endosomal part	5.9×10^{-9}	23.0	HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1
Cell projection	1.7×10^{-8}	1.7	ABII, ACTN1, ACTN1, ACTN2, ACTR2, ADCY5, ALS2, ANGPT1, ANGPT2, APBB1IP, APBB2, APOA1BP, APP, ARHGAP24, ARPC5, BMPR1B, CABS1, CACNA1A, CADM2, CATSPERB, CDC40, CDC88A, CDH13, CDH23, CHL1, CHRM2, CLIC5, CNGA3, CNR2, CNTN4, CNTNAP2, CPLX1, CTNNA3, CXADR, DBH, DCC, DDC, DNAH8, DNER, DNMT3, DOCK4, DSCAM, DYNC2H1, EPHA7, EPHB1, EVC, EVC2, FAPB2, FAM65B, FER, FGD4, FGD5, FOPNL, FRMD4B, FSCB, GABBR2, GAS7, GRIA1, GRID2, GRIK3, GRIK4, GRIN2B, GRIN3A, GRIP1, GRM7, GRM8, IFT57, IQCB1, IQGAP2, ITGA1, KALRN, KCNIP1, KCNIP4, KCNQ4, KIRREL3, KLHL1, KLHL14, KLHL24, LDB3, LDHC, LRRK16A, LRRK2, MAGI1, MAPT, MEGF10, MTSS1, MYO10, MYO1B, MYO3A, MYO5A, MYO5B, MYRIP, NCAM2, NCSI, NOV, NRCAM, NTM, ODZ4, PACRG, PALLD, PCDH15, PEX5L, PKHD1, PLD1, PRKCA, PTPN13, PTPRM, RAB27A, RAPGEF4, RASGRF1, RELN, RPTOR, SCN10A, SEMA3A, SEPT11, SLC1A2, SLC39A14, SLC8A1, SLC9C1, SNCA, SPATA13, SVIL, SWAP70, SYNPR, TEK, TESC, TIAM2, TMPRSS15, TP63, TRIM9, TLL11, TULP3, WWOX
MHC class I protein complex	6.0×10^{-8}	608.5	HLA-A, HLA-B, HLA-C
Phagocytic vesicle membrane	8.8×10^{-8}	159.9	DMBT1, HLA-A, HLA-B, HLA-C
Golgi membrane	2.4×10^{-7}	18.6	HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1
Clathrin-coated vesicle membrane	5.6×10^{-7}	50.2	HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRB1
Integral to plasma membrane	6.8×10^{-7}	2.0	ABCA1, ABCA4, ABCB5, ALK, ANK2, ART3, BMPR1B, CDH4, CLCNKB, CNR2, DSCAM, EMR1, FCER2, FLVCR1, GABRR1, GPC5, GPC6, GRIK2, GRIN2A, GRM5, HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DQA1, HLA-DQA2, HLA-DRA, HLA-DRB1, IL1RL2, KCNMB3, KL, LHCGR, MUC12, NOTCH4, NRG3, NRXN1, NRXN3, OPCML, PCDHA1, PCDHA10, PCDHA11, PCDHA2, PCDHA3, PCDHA4, PCDHA5, PCDHA6, PCDHA7, PCDHA8, PCDHAC1, PLSCR1, PPYR1, PTPRB, PTPRD, PTPRM, RAMP3, SCARB1, SCNN1G, SLC15A2, SLC17A5, SLC2A9, SLC01B1, SLC01B3, TEK
Intrinsic to plasma membrane	7.4×10^{-7}	1.9	ABCA1, ABCA4, ABCB5, ALK, ANK2, ART3, ASIC2, BMPR1B, CDH4, CLCNKB, CLEC1A, CNR2, DSCAM, EMR1, FCER2, FLVCR1, GABRR1, GPC5, GPC6, GRIK2, GRIN2A, GRM5, HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DQA1, HLA-DQA2, HLA-DRA, HLA-DRB1, IL1RL2, KCNMB3, KL, LHCGR, MUC12, NOTCH4, NRG3, NRXN1, NRXN3, OPCML, OPRK1, PCDHA1, PCDHA10, PCDHA11, PCDHA2, PCDHA3, PCDHA4, PCDHA5, PCDHA6, PCDHA7, PCDHA8, PCDHAC1, PKHD1, PLSCR1, PPYR1, PTGER3, PTPRB, PTPRD, PTPRM, RAMP3, ROR1, SCARB1, SCNN1G, SLC15A2, SLC17A5, SLC2A9, SLC01B1, SLC01B3, SPTB, TEK, TSPAN9
Lysosomal membrane	9.8×10^{-7}	10.1	CUBN, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DQB2, HLA-DRA, HLA-DRB1, HLA-DRB5, SLC17A5
Synapse part	1.2×10^{-6}	1.9	ALS2, AMPH, ANK2, ANK3, ANKS1B, CADPS2, CHRM2, CHRNA9, CHRNB3, CLSTN2, CNH3, DBH, DDC, DISC1, DLG2, DLGAP1, DNM3, DPYSL2, EPHA7, ERBB4, ERC2, EXOC4, GABBR2, GABRB2, GABRG3, GABRR1, GLRA3, GRIA1, GRIA4, GRID2, GRIK2, GRIK3, GRIK4, GRIN2A, GRIN2B, GRIN3A, GRIP1, GRM5, GRM7, GRM8, LRFN2, LRRK2, LRRK7, LRRTM4, LYN, MAGI2, NCSI, NETO1, NRXN1, NTRK2, PCLO, PLCB4, PSD3, RAB3C, RIMS1, RIMS2, SLC1A2, STON2, SV2B, SV2C, SYN3, SYNE1, SYNPR, SYT6, SYT9, TANC1, TMEM163, TRIM9, UNC13A, UNC13C
Vacuolar membrane	1.5×10^{-6}	8.5	CUBN, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DQB2, HLA-DRA, HLA-DRB1, HLA-DRB5, SLC17A5
Golgi apparatus part	1.6×10^{-6}	14.3	HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1
Extracellular matrix part	2.8×10^{-6}	2.3	ADAMTS1, AMTN, CCBE1, COL13A1, COL21A1, COL24A1, COL27A1, COL4A1, COL4A2, COL4A3, COL5A2, COL9A1, COLEC12, CTHRC1, EGLAM, EMID1, EMID2, FBN2, GLDN, GRIN2B, LAMA1, LAMA2, LAMC1, LAMC2, LEPREL1, LOXL2, MATN2, NID2, NTN1, NTN4, SMO1, SMO2, SNCA, THBS2, THSD4, TIMP2, TNF, USH2A

GO categories in which false discovery rate is less than 0.01.

Table S24 continued.

Description	<i>p</i> -value	Enrichment	Genes
Early endosome membrane	5.0×10^{-6}	160.1	<i>HLA-A, HLA-B, HLA-C</i>
Organelle membrane	9.7×10^{-6}	5.7	<i>CPE, DMBT1, HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, RNF144B</i>
Synaptic membrane	1.0×10^{-5}	2.1	<i>ANK2, ANK3, ANKS1B, CADPS2, CHRM2, CHRNA9, CHRN3, CLSTN2, CNH3, DISC1, DLG2, DLGAP1, EPHA7, ERC2, GABBR2, GABRB2, GABRG3, GABRR1, GLRA3, GRIA1, GRIA4, GRID2, GRIK2, GRIK3, GRIK4, GRIN2A, GRIN2B, GRIN3A, GRIP1, GRM7, GRM8, LRFN2, LRRC7, LRRTM4, NCS1, NETO1, NRXN1, PSD3, RIMS1, RIMS2, SLC1A2, SYNE1, TANC1, UNC13A, UNC13C</i>
Vacuolar part	1.3×10^{-5}	6.0	<i>CUBN, GPC5, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DQB2, HLA-DRA, HLA-DRB1, HLA-DRB5, SLC17A5</i>
Endoplasmic reticulum part	1.5×10^{-5}	10.3	<i>HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1</i>
Neuron projection	3.3×10^{-5}	1.7	<i>ACTN2, ALS2, APP, BMPR1B, CACNA1A, CADM2, CDH13, CHL1, CHRM2, CNR2, CNTN4, CNTNAP2, CPLX1, CXADR, DBH, DCC, DDC, DNER, DNM3, DSCAM, EPHA7, EPHB1, GABBR2, GRIA1, GRID2, GRIK3, GRIK4, GRIN2B, GRIN3A, GRIP1, GRM7, GRM8, ITGA1, KALRN, KCNIP1, KCNIP4, KCNQ4, KIRREL3, KLHL1, KLHL14, KLHL24, LRRK2, MAPT, MYO10, MYO5A, MYO5B, NCAM2, NCS1, NOV, NRCAM, NTM, ODZ4, PEX5L, PRKCA, PTPN13, RAB27A, RAPGEF4, RASGRF1, RELN, RPTOR, SCN10A, SEMA3A, SEPT11, SLC1A2, SLC8A1, SNCA, SYNPR, TP63, TRIM9</i>
Synapse	7.2×10^{-5}	2.1	<i>AB11, APBB2, APP, CADM2, CADPS, CAMK2D, CDH23, CHRM2, CPLX1, CXADR, EGFLAM, EPHA7, GRID2, GRIN3A, GRM7, MAGI2, MYRIP, NETO1, NRCAM, NRG1, NRXN1, NTM, NTRK2, PCDH15, PCLO, PHACTR1, PTPRF, RAPGEF4, RIMBP2, SDC2, SEPT11, SHISA9, SNCA, SNTB1</i>
Extracellular matrix	1.1×10^{-4}	1.8	<i>ABI3BP, ADAMTS12, ADAMTS14, ADAMTS16, ADAMTS18, ADAMTS2, ADAMTS20, ADAMTSL1, ADAMTSL2, AMTN, CDON, CHL1, COL21A1, COL4A1, COL4A2, COL5A2, CPXM2, DMBT1, DPT, EFEMP1, EGFLAM, FBN2, FGF1, FRAS1, GPC5, GPC6, GPLD1, HPSE2, IGFBP7, LAMA1, LAMA2, LAMC1, LMCD1, LTBP1, MATN2, MEPE, MMP20, NAV2, NID2, NOV, PLSCR1, PXDN, RELN, SMOC2, SPARCL1, TNN, TNR, VIT, VWF</i>
Protein complex	1.4×10^{-4}	4.1	<i>ARPC5, HLA-A, HLA-B, HLA-C, HLA-DPA1, HLA-DPB1, HLA-DQA1, HLA-DQB1, RNF144B, TEKT4</i>
Postsynaptic membrane	2.0×10^{-4}	2.0	<i>ANK2, ANK3, ANKS1B, CADPS2, CHRM2, CHRNA9, CHRN3, CLSTN2, CNH3, DISC1, DLG2, DLGAP1, EPHA7, GABBR2, GABRB2, GABRG3, GABRR1, GLRA3, GRIA1, GRIA4, GRID2, GRIK2, GRIK3, GRIK4, GRIN2A, GRIN2B, GRIN3A, GRIP1, GRM7, LRFN2, LRRC7, LRRTM4, NCS1, NETO1, PSD3, SYNE1, TANC1</i>
Cell-cell junction	2.1×10^{-4}	1.8	<i>ABCB5, ACTN1, AMTN, ANK2, ANK3, B4GALT1, CCDC85C, CDC42BPA, CDSN, CGNL1, CLDN1, CLDN10, CLDN14, CLDN20, COL13A1, CTNNA3, CXADR, DSC1, DSG1, FAT2, FND1, FRMD4A, IGSF5, INADL, KAZN, KIFC3, LAMA1, MAGI1, MAGI2, NFASC, NPHS2, PARD3, PARD3B, PDZD2, PKP1, PKP2, PLEKHA7, PTPRM, PTPRU, SCN1A, SHROOM3, SLC2A1, SLC8A1, SORBS1, STX2, TEK, TIAM1, TJP2, TRPC4, TRPC6</i>
Ion channel complex	2.5×10^{-4}	2.1	<i>AKAP6, ANO2, ANO3, BEST3, CACNA1A, CACNA2D1, CASQ2, CATSPERB, CHRNA9, CHRN3, CLCNKB, CNTNAP2, GABBR2, GABRR1, KCNA6, KCNB2, KCNJ16, KCNK2, KCNMB1, KCNMB2, KCNMB3, KCNQ4, KCNQ5, PEX5L, RYR2, SCN10A, SCN1A, SCN3A, SCNN1G, TRDN, TRPC4</i>
Flagellum part	2.7×10^{-4}	19.5	<i>PACRG, SLC9C1, SPAG16, TEKT4</i>
Microtubule-based flagellum part	2.7×10^{-4}	19.5	<i>PACRG, SLC9C1, SPAG16, TEKT4</i>
Collagen type IV	3.3×10^{-4}	24.1	<i>COL4A1, COL4A2, COL4A3</i>
Proteinaceous extracellular matrix	3.9×10^{-4}	1.9	<i>ABI3BP, ADAMTS12, ADAMTS14, ADAMTS16, ADAMTS18, ADAMTS2, ADAMTS20, ADAMTSL1, ADAMTSL2, AMTN, CHL1, DMBT1, DPT, EFEMP1, EGFLAM, FBN2, FGF1, GPC5, GPC6, GPLD1, HPSE2, LAMA1, LTBP1, MATN2, MEPE, MMP20, NAV2, PXDN, RELN, SMOC2, SPARCL1, TNN, TNR, VIT, VWF</i>

GO categories in which false discovery rate is less than 0.01.