

Supplementary Table 8. Significantly enriched disease classes using 876 gene list differentially expressed between assumed somatic MMR deficient and MMR proficient endometrioid tumors

Category	Term	Fold enrichment	p-value	Benjamini	Genes
GAD_DISEASE_CLASS	METABOLIC	1.31	1.81E-10	3.27E-09	LYPD2, SYT1, CGA, CYP24A1, EDN3, CDX2, PTGS2, SCN3B, ADCY8, NELL1, FSTL4, SYT6, LEMD1, MAGEC1, MAGEC2, CDH22, BSX, CDH20, APOD, CCBE1, APOH, CFI, CHRNA6, ROS1, TWIST2, CHRNA3, TWIST1, CHRNA2, WNT10A, F12, TMEFF2, CRTAC1, PMCH, MDGA2, GRIN2A, COLEC10, PTPRT, CDHR5, PROX1, PPARGC1A, CTNNA2, TMEM132C, RETN, CD36, CCR3, C10RF87, HHLA2, HGC6.3, FAM163B, RBP4, SCN1A, MGAT5B, IGF1, SERPINA12, PCDH20, SORCS1, PEX5L, OTOS, RIMS1, FAM19A5, TMEM229A, ARX, C10ORF90, NKX2-1, LGSN, NKX2-2, NR1H4, BMP4, BMP2, NTF3, CYP2C9, CCDC81, PCDH10, CHI3L2, PCDH15, CCDC158, NTRK3, ABCG8, GH1, DLX2, NPY, PKP1, EPHA8, APCDD1L, SFRP2, NTRK2, RGS6, CHRN4, PON1, AGXT2, FAM43B, UTS2R, BMP7, ABO, PLA2G4E, BMP5, SLC46A2, KCNJ15, JPH3, FGF8, RNF182, SPAG17, CFHR1, CFHR2, KISS1R, TMEM108, GPX5, SERPINA6, SLC24A2, FOXB1, CFHR5, FGF3, CCKBR, OR2W3, GRM5, AMBP, FMN2, PROK2, GRM3, ALOX15, ZNF135, GRM8, DOK5, KRTAP3-2, IL12A, TPH1, CXCL1, TFR2, SLC19A3, KIT, RTL1, CPN1, FAM46D, FMO2, AGT, FMO3, MC3R, SIM1, PTPRZ1, TBX4, ATP1A4, IGF2, ATP1A2, TMPRSS6, PLG, DKK4, PCK1, DKK1, GRIA1, KREMEN1, PHF21B, LRP2, HTR2C, QRFPR, SLC8A3, FGF19, SLC6A1A, STK31, SLC13A5, PLXNA4, LMO1, GABRB2, WNT3A, GRIK3, LRTM1, F13A1, MAEL, LRRC4C, DLK1, FGF12, PDX1, C20ORF197, ANKRD7, CNGB3, GDNF, MMP1, IL10, REG3A, LPA, C8ORF48, GATA4, DLL3, SIX3, PROKR2, CHODL, CST1, AJAP1, ASCL1, RASGRF1, CELF4, CARTPT, GPR50, RELN, ASCL4, DRD1, TMEM212, TSHZ1, ADAMTS12, ONECUT1, DRD2, DRD5, ITLN2, ASTN1, HMP19, PAH, NKAIN3, TRH, LIN28B, SLC02A1, HOXA2, HOXA3, FGB, HOXA5, HOXA6, CNR1, OR2T33, HOXA9, AXIN2, RUNX2, KIAA1210, HAVCR1, GABRA3, SLC6A11, UCP1, CACNA2D3, CPS1, FAM178B, CACNA1S, THSD7B, CXCL14, FLG, SLC7A2, THSD4, SYT14, MYO16, FABP4, WIF1, CACNA1E, VCX, SST, SLC5A12, NRG3, PNMT, TACR1, SCGB1A1, DGCR5, PCP4, PRMT8, PAX7, SCN7A, ALX4, NRG2, C11ORF87, ABHD12B, C9ORF84, NRXN3, SOX11, OTC, PEBP4, EDAR, SEZ6L, ALK, EYA4, ADRB2, HOXC13, ZNF717, ZNF716, GPR15, CYP2A6, CYP2A7, WNT11, NGFR, CUX2, CA2, CTSG, IRX4, CPLX2, CCK, ADAMTS14, ANKRD34B, HS3ST4, TCAP, ADAMTS16, IRX1, CD109, ISM1, SHISA6, CALCA, UGT1A6, COL9A3, SLC01A2, C3ORF67, HAND1, FAM135B, SYN3, REN, SYN2, CCDC129, TUBA3C, SCNN1B, SCN5A, DPT, GSTA1, SLC12A1, ADARB2, ALPK3, KLK3, FRMPD1, FRMPD4, DBH, ISL1, TMEM163, CSORF38, ATP8A2, CRH, SP7, SLC14A1
GAD_DISEASE_CLASS	PSYCH	1.61	1.55E-09	1.39E-08	SLCO6A1, SYT1, CGA, PTGS2, GABRB2, GRIK3, IL19, FSTL4, SYT6, PDX1, LRRC4C, GDNF, IL10, REG3A, ATP2B3, CRYGC, APOD, CHRNA6, CHRNA3, CHRNA2, RNLS, PMCH, PLD5, MDGA2, GRIN2A, PTPRT, IL24, AJAP1, PPARGC1A, TMEM132C, CTNNA2, RETN, ASCL1, GABRR1, LSAMP, CCR3, VSNL1, C10RF87, GPR50, CARTPT, RELN, CHGB, PRODH, DRD1, SNAP91, DRD2, DRD5, ASTN1, HMP19, MME, PAH, TRH, NRN1, OTOS, ARX, HOXA1, CNR1, AXIN2, RUNX2, MOBP, NTF3, SLC6A11, GABRA3, CYP2C9, OSBP16, UCP1, CPS1, NTRK3, DLX2, GH1, NPY, PKP1, FLG, NTRK2, PON1, CHRN4, WIF1, BMP7, SST, ABO, ADRA1D, PLA2G4D, NRG3, PNMT, TACR1, GLRA2, SCGB1A1, SERPINA6, NRG2, GABRG1, CCKBR, NRXN3, SDK1, CACNG5, ALK, GRM5, MYT1L, GRM3, ADRB2, GRM8, DOK5, NPPC, CYP2A6, NGFR, CUX2, TPH1, CHL1, CPLX3, CPLX2, CCK, ADAMTS14, ADAMTS16, IRX1, KIT, CALCA, CALCB, NPTX2, AGT, SYN3, SYN2, FMO3, NEFH, POU3F2, MC3R, DCX, SIM1, HTR3C, HTR3D, CES1, PTPRZ1, IGF2, TBX1, ATP1A2, ISL1, DBH, PCK1, DKK4, NTS, PNOC, CYP26C1, GRIA1, CDH17, CRH, SP8, LRP2, HTR2C
GAD_DISEASE_CLASS	UNKNOWN	1.65	1.62E-08	9.74E-08	SLCO6A1, CYP24A1, EDN3, PTGS2, GABRB2, GRIK3, F13A1, PGC, IL19, PDX1, GDNF, IL10, MMP1, RNF212, GP9, CDH22, LPA, GATA4, GP2, APOH, CFI, CHRNA3, TWIST1, F12, MDGA2, ABCC11, CST2, PROKR2, PPARGC1A, CLEC4M, ASCL1, CD36, CCR3, GPR50, RELN, CHGB, PRODH, XDH, RBP4, SCN1A, DRD1, DRD2, DRD5, MME, PAH, LIN28B, REG1A, FGB, CNR1, NKX2-1, AXIN2, RUNX2, NKX2-5, NR1H4, BMP4, BMP2, SLC6A11, GABRA3, CYP2C9, UCP1, CACNA1S, NTRK3, ABCG8, GH1, SALL4, NPY, FLG, NTRK2, PON1, CHRN4, FABP4, BMP7, ABO, PNMT, TACR1, MLH1, SCGB1A1, KISS1R, SERPINA6, CFHR5, ALX4, CCKBR, SOX14, EDAR, ALK, PROK2, ALOX15, ADRB2, ULBP1, IL12A, NPPC, CYP2A6, TPH1, PRTN3, KIT, CALCA, UGT1A6, COL9A3, CD177, AGT, REN, FMO2, FMO3, DCX, SCN5A, HTR3C, GSTA1, KLK8, CES1, KLK3, TBX4, IGF2, TBX1, ATP1A2, DBH, TMPRSS6, PLG, DKK1, NTS, NRAP, SLC14A1, HTR2C
GAD_DISEASE_CLASS	CARDIOVASCULAR	1.29	4.91E-07	2.21E-06	CYP24A1, EDN3, SYT1, PTGS2, SCN3B, ADCY8, NELL1, FSTL4, SYT6, STOML3, MAGEC1, MAGEC2, APOD, CCBE1, APOH, CHRNA6, ROS1, CHRNA3, WNT10A, F12, TMEFF2, CRTAC1, PMCH, ADAMTS20, MDGA2, NKX2-8, GRIN2A, PTPRT, CDHR5, TMEM26, PPARGC1A, CTNNA2, CLEC4M, RETN, CD36, C14ORF39, SPAG6, CCR3, C10RF87, CHGB, ODAM, SCN1A, SERPINA10, IGF1, PCDH20, MME, SORCS1, NRN1, RIMS1, TMEM229A, FAM19A5, IL17A, VWA5B1, C10ORF90, NKX2-1, LGSN, SPERT, NKX2-5, NR1H4, BMP2, CYP2C9, PCDH10, PCDH15, KRT35, ABCG8, NTRK3, GH1, NPY, PKP1, APCDD1L, SFRP2, NTRK2, RGS6, CHRN4, PON1, MCCD1, PAPP2, ABO, BMP5, JPH3, GLRA2, APCDD1, RNF182, SLC24A2, FOXB1, DPEP1, IL13RA2, SDK1, ZNF334, GRM5, FMN2, PROK2, LYZL2, ALOX15, GRM8, DOK5, NPPC, IL12A, SLC27A6, SCN11A, TPH1, CHL1, CXCL1, CYP2F1, PRTN3, TFR2, KIT, SEC14L3, CYP2A13, BEST3, AGT, FMO3, GALNT13, RBM20, IGF2, TBX1, ATP1A2, ZNF662, TMPRSS6, PLG, PCK1, GRIA1, HTR2C, QRFPR, SLC8A3, SLC06A1, PLXNA4, LMO1, STK31, GABRB2, LRTM1, F13A1, MAEL, LRRC4C, FGF12, PDX1, ANKRD7, GDNF, CNGB3, MMP1, IL10, GP9, LPA, C8ORF48, GATA4, RNLS, CST2, AJAP1, ASCL1, GABRR1, RASGRF1, LSAMP, CELF4, CARTPT, GPR50, RELN, NGB, XDH, DRD1, TSHZ1, SLC38A8, DRD2, ASTN1, HMP19, TRH, TRIM71, FGB, CNR1, LMAN1L, UCP1, CACNA2D3, CPS1, FAM178B, TINAG, THSD7B, SALL4, THSD4, TRIM58, SYT14, MYO16, FABP4, CACNA1E, WIF1, VCX, TMEM89, ADRA1D, SLC5A12, NRG3, PNMT, CORIN, TMEM233, SCGB1A1, KRTAP11-1, PRMT8, FLJ16779, LOXL4, SCN7A, ALX4, C11ORF87, GABRG1, ABHD12B, C9ORF84, TRPM5, NRXN3, SOX11, OTC, PEBP4, EDAR, SEZ6L, ALK, EYA4, ADRB2, ZNF717, ZNF716, WNT11, GPR12, CTSG, IRX4, CPLX3, CPLX2, ANKRD34B, HS3ST4, TCAP, IRX1, VPREB1, CD109, ISM1, CALCA, SLC01A2, C3ORF67, HAND1, FAM135B, SYN3, REN, SCNN1B, SCN5A, DPT, GSTA1, SLC12A1, ADARB2, KLK2, KLK4, SOX30, FRMPD1, FRMPD4, ISL1, DBH, TNFSF8, KRT74, TMEM163, CSORF38, TSG1, SLC14A1

GAD_DISEASE_CLASS	NEUROLOGICAL	1.33	2.02E-05	7.27E-05	<p>SYT1, PTGS2, GABRB2, ADCY8, F13A1, NELL1, FGF12, TCEAL2, ANKRD7, GDNF, IL10, MMP1, REG3A, LPA, APOD, C8ORF48, KRT85, RGR, KRT83, CHRNA3, CHRNA2, RNLS, CRTAC1, NKX2-8, GRIN2A, SIX3, TMEM26, FGF20, PPARGC1A, PROX1, ASCL1, SPAG6, RASGRF1, CCR3, VSNL1, C10RF87, HHLA2, RELN, NGB, FAM163B, CALHM3, CHGB, RBP4, SCN1A, DRD1, DRD2, DRD5, MME, SORCS1, PAH, NKAIN3, RIMS1, FAM19A5, HOXA1, FGB, CNR1, C10ORF90, RUNX2, NR1H4, TDRD1, BMP4, BMP2, TRPC3, MOBP, NTF3, CYP2C9, CACNA1I, CHI3L2, PCDH15, UCP1, CPS1, CACNA1S, THSD7B, NTRK3, GH1, SALL4, NPY, APCDD1L, NTRK2, MYO16, PON1, CHRNB4, RGS6, CACNA1E, BMP7, SST, PLA2G4D, SLC5A12, CSTL1, PRPH, JPH3, PNMT, CD8B, TACR1, GLRA2, APCDD1, SCGB1A1, DGCR5, BARX1, TMEM108, PAX7, SLC24A2, DNAJC12, LOXL4, SCN7A, KCNQ2, NRG2, C11ORF87, TMEM105, CCKBR, SOX11, OTC, CPXM2, EDAR, SLIT1, GRM5, FMN2, ALOX15, GRM3, ADRB2, ZNF717, HAO2, IL12A, C1QL1, CYP2A6, WNT11, NGFR, TPH1, CTSG, CXCL1, IRX4, CCK, HS3ST4, ADAMTS14, ADAMTS16, ISM1, CPN1, CALCA, UGT1A6, SLC01A2, COL9A3, C3ORF67, HPSE2, CALML3, FAM135B, AGT, REN, SYN3, SYN2, DYDC1, NEFH, POU3F2, TGM6, SCN5A, GSTA1, GSTA2, GSTA3, ADARB2, FRMPD1, FRMPD4, IGF2, ATP1A2, DBH, TMPRSS6, PLG, PCK1, DKK1, CYP26C1, NRAP, GRIA1, TMEM163, CSORF38, GAMT, LRP2, HTR2C, DMBT1</p>
GAD_DISEASE_CLASS	OTHER	1.46	4.17E-05	1.25E-04	<p>CGA, CYP24A1, EDN3, PTGS2, GABRB2, PGC, F13A1, IL19, GDNF, IL10, MMP1, RNF212, LPA, APOH, ROS1, CHRNA3, TWIST1, F12, CLCA2, PLD5, GRIN2A, PTPRT, IL24, PPARGC1A, CTNNA2, RETN, ASCL1, CD36, CCR3, GPR50, RELN, PRODH, XDH, DRD1, SCN1A, DRD2, DRD5, MME, PAH, IL17A, FGB, CNR1, UPK1A, C10ORF90, AXIN2, NR1H4, BMP4, CYP2C9, PCDH15, UCP1, TINAG, GH1, NPY, FLG, PON1, RGS6, ABO, ADRA1D, NRG3, TACR1, MLH1, SCGB1A1, SERPINA6, FGF3, C9ORF84, CCKBR, SDK1, GRM5, EYA4, ALOX15, ADRB2, ULBP1, CA6, IL12A, CYP2A6, TPH1, CHL1, TYRP1, PRTN3, TFR2, CD109, KIT, CYP2A13, UGT1A6, COL9A3, CD177, FMO2, AGT, FMO3, MC3R, SCNN1B, TLX3, SCN5A, HTR3C, HTR3D, GSTA1, SLC12A1, ADARB2, IGF2, ATP1A2, FLJ34503, NRAP, GRIA1, FMO6P, CRH, HTR2C, GFRA3</p>
GAD_DISEASE_CLASS	CHEMDEPENDENCY	1.26	6.98E-05	1.79E-04	<p>CGA, SYT1, ADCY8, PGC, NELL1, FSTL4, CDH20, KCNK9, CCB1, CHRNA6, CFI, ROS1, CHRNA3, CHRNA2, TMEFF2, CRTAC1, PLD5, MDGA2, GRIN2A, PKHD1L1, PTPRT, ABCC12, PPARGC1A, TMEM132C, CTNNA2, FAM163B, PRODH, MGAT5B, SERPINA11, SERPINA12, SORCS1, PEX5L, RIMS1, FAM19A5, IL17A, VWA5B1, LGSN, GPR155, NTF3, PCDH10, CHI3L2, PCDH15, ABCG8, NTRK3, NPY, PKP1, APCDD1L, NTRK2, MCCD1, CHRNB4, PON1, RGS6, PAPP2, TREML2, BMP5, JPH3, FAM3B, GLRA2, APCDD1, SPINK8, TMEM108, SERPINA6, RFL4A, CCKBR, SDK1, CPXM2, GRM5, FMN2, IGFN1, GRM3, GRM8, GLB1L3, TPH1, CHL1, HPSE2, AGT, TEK1, C10ORF53, GALNT13, PTPRZ1, RBM20, CYP4F11, TBX1, HYDIN, NRAP, GRIA1, KREMEN1, PHF21B, LRP2, HTR2C, SLC8A3, SLC06A1, SLC13A5, PLXNA4, LMO1, STK31, GABRB2, GRIK3, F13A1, IL19, MAEL, LRRC4C, FGF12, CNGB3, IL10, REG3A, CRYGC, LPA, SRRM4, PGLYRP4, GATA4, SIX3, PROKR2, CECR2, FGF20, GABRR1, LSAMP, CELF4, CST5, CARTPT, RELN, NRSN1, DRD1, TSHZ1, SNAP91, KBTBD12, SLC38A8, DRD2, DRD5, ASTN1, KCNA6, NKAIN3, TMEM63C, DBX2, REG1A, CNR1, GPR26, ADAM32, HOXA9, SDR16C5, RUNX2, LMAN1L, SLC6A11, GABRA3, MUC7, CPS1, CACNA2D3, TINAG, CACNA1S, THSD7B, DPPA2, SALL4, CXCL14, THSD4, SYT14, MYO16, CACNA1E, CPB1, ADRA1D, NDST3, IGDCC3, NDST4, NRG3, RGS7BP, PNMT, CD8B, TACR1, TMEM233, PRMT8, PCP4, GABRG1, HMGC11L, FAM24B, NRXN3, PEBP4, HEPHL1, SEZ6L, ALK, EYA4, MYT11, ADRB2, CA6, CYP2A6, WNT11, CPLX3, CPLX2, CCK, ADAMTS14, HS3ST4, ADAMTS16, CD109, SHISA6, SLC01A2, REN, SYN3, SYN2, CCDC129, TGM3, UGT2A3, SCN5A, GSTA1, ADARB2, FRMPD1, DBH, RGS22, KRT74, PNOC, ATP8A2, CRH, SLC14A1</p>
GAD_DISEASE_CLASS	NORMALVARIATION	1.85	1.12E-04	2.53E-04	<p>PTGS2, DRD2, F13A1, CD109, PAH, DLK1, LIN28B, IL10, MMP1, SPAG17, CYP2A13, UGT1A6, LPA, FGB, AGT, REN, FMO3, MC3R, TCHH, GSTA1, GSTA2, BMP2, CYP2C9, PMCH, IGF2, DBH, PPARGC1A, CLEC4M, GRM5, RETN, ADRB2, CD36, NPY, ULBP1, PON1, IL12A, CARTPT, CYP2A6, FABP4, NGFR, LRP2, SLC14A1, HTR2C, ABO</p>
GAD_DISEASE_CLASS	DEVELOPMENTAL	1.39	6.34E-04	1.27E-03	<p>EDN3, FGF8, CRABP1, SCN3B, WNT3A, F13A1, TACR1, FGF12, LRRC4C, KCNJ12, GDNF, CNGB3, MMP1, TTL2, SPAG17, CDH22, BARX1, PAX7, GATA4, ALX4, WNT6, FGF4, TWIST1, TCHH, GABRG1, WNT10A, NRXN3, PMCH, DLL3, SIX3, AJAP1, ALK, ADRB2, C14ORF39, NPPC, CYP2A6, WNT11, CUX2, TPH1, CHL1, PRODH, ARHGDI1, TYRP1, HS3ST5, SNAP91, IRX1, MME, LIX1, PAH, TSPYL5, LIN28B, FAM19A5, SHISA6, FAM46D, ARX, HOXA1, HOXA2, CRB2, HOXA5, VWA5B1, SYN3, HOXA9, TGM3, NKX2-1, SDR16C5, AXIN2, RUNX2, NKX2-5, SIM1, BMP4, BMP2, TBX4, DGKK, TBX1, IGF2, MUC7, ISL1, CACNA1S, PLG, SFRP5, GH1, DLX2, SALL4, DKK1, PKP1, CYP26C1, GRIA1, TMEM163, KREMEN1, NTRK2, RGS6, PON1, SP8, BMP7, HTR2C, BMP5</p>
GAD_DISEASE_CLASS	REPRODUCTION	1.47	1.44E-03	2.59E-03	<p>PTGS2, TACR1, F13A1, SCGB1A1, IL10, MMP1, BSX, KISS1R, LPA, PVALB, SERPINA6, DDX25, PIWIL1, CHRNA6, IL13RA2, FGF4, F12, CRISP2, MDGA2, ABCC11, PROKR2, PPARGC1A, ALOX15, ADRB2, CCR3, DEFA5, IL12A, TPH1, EIF5A2, LY6G6F, IGFBL1, DRD2, TFR2, KIT, SYCP2, LIN28B, ARX, FGB, REN, AGT, FMO3, SCNN1B, PTX3, HTR3C, GALNT13, HTR3D, BMP2, CYP2C9, MSH4, IGF2, TBX1, UCP1, CPS1, TMPRSS6, PLG, THSD7B, MUC4, GH1, SALL4, NPY, GRIA1, THSD4, PON1, CRH, SMC1B</p>
GAD_DISEASE_CLASS	HEMATOLOGICAL	1.35	1.65E-03	2.70E-03	<p>KCNJ15, SLC06A1, SYT1, NRG3, RGS7BP, PTGS2, GRIK3, F13A1, NELL1, GLRA2, MAEL, FSTL4, LEMD1, LRRC4C, ANKRD7, GDNF, IL10, MMP1, MAGEC2, GP9, CFHR1, DGCR5, GAB4, PCP4, GPX5, GPHB5, ALX4, F12, NRXN3, CRISP2, SOX11, MDGA2, GRIN2A, SDK1, SEZ6L, AJAP1, ALK, PPARGC1A, PROX1, PROK2, FMN2, ADRB2, CD36, ZNF717, C10RF87, CARTPT, CUX2, CHL1, MYH7B, MGAT5B, GSDMA, DRD2, TFR2, ADAMTS16, CD109, SORCS1, C9ORF135, KIT, NKAIN3, NRN1, OTOS, GPR141, FAM19A5, SHISA6, IL17A, SLC01A2, FGB, SYN3, AGT, RUNX2, NKX2-5, GALNT13, BMP4, BMP2, NFE2, CYP2C9, CACNA1I, PCDH10, TBX1, PCDH15, CACNA2D3, CPS1, TMPRSS6, KRT35, SFRP5, GRIA1, CSORF38, THSD4, TRIM58, FABP4, TSG1, ABO, ADRA1D, PGK2, SMC1B</p>

<i>GAD_DISEASE_CLASS</i>	<i>IMMUNE</i>	1.16	0.02	0.03	<i>SLCO6A1, CYP24A1, PLXNA4, STK31, PTGS2, GABRB2, F13A1, NELL1, IL19, FSTL4, SYT6, PDX1, DLK1, LRRC4C, ANKRD7, GDNF, IL10, MMP1, GAB4, LPA, JSRP1, ZNF300, GP2, CCBE1, APOH, RGR, F12, TMEFF2, RNLS, PLD5, MDGA2, CST2, PTPRT, IL24, AJAP1, PPARGC1A, CTNNA2, RETN, VSIG2, CBLN2, DEFA6, RASGRF1, DEFA5, CCR3, C1ORF87, CELF4, RELN, XDH, LY6G6E, LY6G6F, GSDMA, DRD2, LY6G6C, SORCS1, MYT1, RIMS1, LIN28B, IL17A, PEG10, REG1A, IL23A, FGB, CNR1, PIP, SDR16C5, NKX2-5, HAVCR1, SLC6A11, GABRA3, CYP2C9, C6ORF15, CACNA1I, PCDH15, MUC7, UCP1, CACNA2D3, MUC4, SFRP5, DLX2, ZNF311, NPY, PKP1, SFRP2, FLG, EPHA8, THSD4, MYO16, MCCD1, PON1, SYT14, WIF1, ABO, SLC5A12, INSL4, NDST3, NRG3, PNMT, TACR1, SPINK2, MLH1, TMEM233, SCGB1A1, SPINK5, RNF182, SPAG17, SERPINA6, SLC24A2, IL13RA2, FGF4, NRXN3, PEBP4, CACNG6, SEZ6L, ALK, SLC26A3, FMN2, ALOX15, ADRB2, GRM8, IL12A, C1QL2, SCGB3A2, HCG4, NGFR, CUX2, GPR12, IRX4, TYRP1, CCK, HS3ST4, ADAMTS14, TFR2, ENDOU, IRX1, CD109, KIT, CALCA, UGT1A6, HAND1, C3ORF67, FAM135B, AGT, TEK1, SYN3, MEG3, TUBA3C, NEFH, SCN5A, GSTA1, KLK7, IGF2, DBH, TNFSF8, DKK1, CRH, NHLH2, CYP4F3, SLC14A1, DMBT1</i>
<i>GAD_DISEASE_CLASS</i>	<i>RENAL</i>	1.24	0.03	0.04	<i>CYP24A1, JPH3, STK31, NRG3, PNMT, PTGS2, F13A1, MLH1, FGF12, PDX1, APCDD1, SCGB1A1, IL10, MMP1, CDH20, C8ORF46, APOH, CFHR5, ROS1, C11ORF87, F12, NRXN3, PLD5, SOX11, PTPRT, ALK, PPARGC1A, AMBP, RETN, ADRB2, CD36, AKR1B10, IL12A, CYP2A6, CARTPT, CYP2A7, SCGB3A2, NGFR, CTSG, XDH, TYRP1, WNT16, CYP2F1, IRX1, GPR141, TMEM63C, CYP2A13, SLCO1A2, FGB, SYN3, FMO2, REN, AGT, FMO3, SIM1, GSTA1, BMP4, GSTA2, BMP2, LTK, CYP2C9, MSH4, CACNA1I, IGF2, CYP4F11, UCP1, CPS1, DBH, PCK1, TNFSF8, ABCG8, GH1, DKK1, NPY, NTRK2, MYO16, FMO6P, SYT14, PON1, LRP2, ADRA1D</i>
<i>GAD_DISEASE_CLASS</i>	<i>AGING</i>	1.31	0.03	0.04	<i>SYT1, STK31, NELL1, GLRA2, IL19, MLH1, LRRC4C, ANKRD7, SPINK5, IL10, MMP1, BNIPL, C8ORF46, APOD, SLC24A2, HIST1H2BI, CHRNA3, TWIST1, GABRG1, PPARGC1A, TMEM132C, RETN, GRM3, ADRB2, ZNF717, CLIC6, CELF4, IL12A, CTSG, DRD2, C9ORF135, LIX1, NKAIN3, COL9A3, FGB, AGT, RUNX2, GALNT13, DPT, GSTA1, GSTA2, GSTA3, ADARB2, KLK3, IGF2, PCDH15, DBH, THSD7B, PCK1, CXCL14, FLG, PON1, RGS6, PAPP2, WIF1, LRP2, SST</i>

Significantly enriched classes are in bold italics (adjusted p-value <0.05 used as significance cut-off).