

Supplementary Material

Identification of specific biomarkers and pathways in the treatment response of infliximab for inflammatory bowel disease: *In-silico* analysis

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Table S1 Criteria for selection of DEGs in this study (w/o = without)

(A) IBD vs Control:

Dataset	Criteria	Total number of probes	Total DEGs	Up regulated in IBD	Down regulated in IBD
GSE14580	$P \leq 0.05$ and $\log FC = \pm 1.5$	3090	2848 (2133 w/o duplicates)	2007 (1468 w/o duplicates)	841 (670 w/o duplicates)
GSE73661	$P \leq 0.05$ and $\log FC = \pm 1.5$	221	213 (197 w/o duplicates)	126 (112 w/o duplicates)	87 (85 w/o duplicates)

(B) RE vs NRE: (RE= responders; NRE= non-responders)

Dataset	Criteria	Total number of probes	Total DEGs	Up regulated in RE	Down regulated in RE
GSE14580	$\log FC = \pm 1.5$	586	491 (437 w/o duplicates)	98	393 (339 w/o duplicates)
GSE73661	$P \leq 0.05$ and $\log FC = \pm 1.5$	175	151 (138 w/o duplicates)	30 (28 w/o duplicates)	121 (110 w/out duplicates)
GSE12251	$P \leq 0.05$ and $\log FC = \pm 1.5$	114	110 (88 w/o duplicates)	7	103 (81 w/o duplicates)

GSE23597 (for intersection)	$P \leq 0.05$ and $\log FC = \pm 1.5$	50	50 (43 w/o duplicates)	8 (7 w/o duplicates)	42 (36 w/o duplicates)
GSE23597 (for Metascape analysis)	$P \leq 0.05$ and $\log FC = \pm 1.5$	156	148 (129 w/o duplicates)	19 (16 w/o duplicates)	129 (113 w/o duplicates)
GSE111761	$P \leq 0.05$ and $\log FC = \pm 1.5$	3545	3211 (2789 w/o duplicates)	1483 (1282 w/o duplicates)	1728 (1512 w/o duplicates)

Table S2: List of genes that are differently expressed in GSE14580 and GSE73661 (IBD vs control).

Dataset	Condition	List of genes	
GSE14580	IBD	Upregulated (1468)	Downregulated (670)
		SLC6A14, CXCL1, KYNU, DUSP4, LPCAT1, DUOXA2, DAPP1, HLA-DRA, ADAMTS9, LOC101060835, LOC100996809, HLA-DRB4, HLA-DRB3, HLA-DRB1, HLA-DQB1, ANXA1, CXCL3, LOC101060835, LOC100996809, HLA-DRB5, HLA-DRB4, HLA-DRB1, HLA-DQB1, TTC9, C2CD4A, RPS6KA2, HLA-DMA, CFB, REG4, ARNTL2, INSC, RBPMS, CASP1, CD55, TCN1, CHAC1, MMP12, HLA-DPA1, SAA2, SAA1, LOC100996809, HLA-DRB4, HLA-DRB1, CXCL2, ADM, HSP90B1, PSMB9, CD44, LPIN1, HLA-DRB1, TNIP3, S100A9, PDZK1IP1, UBE2L6, PITPNC1, DUOX2, CARD16, IRAK3, CRELD2, ARFGAP3, MIR8071-2, MIR8071-1, IGHV4-31, IGHM, IGHG2, IGHG1, DUSP6, CD40, CD74, MIR6732, ZC3H12A, GNA15, C4BPB, NOS2, SAMD9L, IL17A, ARFGAP1, SPINK4, NUCB2, SAA2-SAA4, SAA2, SAA1, MEOX1, MMP7, LRP8, IKBIP, DEFB4B, DEFB4A, ASRGL1, IDO1, BACE2, BIRC3, TRIB2, LYN, IFITM3, LOC101060835, HLA-DQB1, TIMP1, TMEM71, PI3, SLC7A11, ALOX5, VNN2, RTEL1-TNFRSF6B, TNFRSF6B, PFKFB3, PHLDA1, LYZ, KDELR3, OLFM4, TAP1,	HMGCS2, SLC22A5, SNX13, ACAT1, ACOX1, PADI2, HMGA2, C1QTNF3-AMACR, AMACR, VLDLR, SLC25A34, SLC26A2, ABCB1, APOBEC3B, PAG1, TMEM171, NLN, PPID, PCK1, SERF1B, SERF1A, RMDN2, ACADM, ZCCHC14, ABCB4, ABCB1, CNKSR3, LAMA1, USP30, CIPC, MT1F, ENTPD5, NBPFI, AQP8, EFNA1, CNNM2, CDKN2B-AS1, RHOU, PRDX6, PLPP1, MT1G, PPP2R3A, TRPM6, CYCS, DDAH2, MIER3, FRMD1, MAML3, DHRS11, ATP5S, UGT1A3, UGT1A1, UGT1A9, UGT1A5, UGT1A8, SCAPER, GUCA2A, GLS, PAQR5, SLC17A4, MT1M, SGK2, SNX30, SEMA5A, SRI, SLC30A10, NAALADL1, CDC14A, HIGD1A, LOC100996506, RETSAT,

	<p>SLC15A3, S100A8, DPY19L1, PML, XAF1, RTEL1-TNFRSF6B, RTEL1, IFITM2, FKBP11, CDH3, NFKBIZ, ANXA5, PIM3, IFITM2, IFITM1, CDC25B, NCF4, SLA, RTEL1, SERPINA3, IFI16, UBD, GABBR1, MCUB, ASPHD2, FBXO16, MMP10, APOL1, LCN2, BAG3, CHI3L1, CCDC167, SERPINA1, ADAM15, LAMP3, SDR16C5, SERPINB5, PIKFYVE, FAM26F, KCND3, MAFF, F3, SBNO2, S100P, RRM2, LILRB2, TGM2, SRGN, TRIM69, CARD16, CASP1, SGMS1, PKIA, ERO1A, CREB3L2, IFI30, PIK3R2, GBP1, PHC1, MMP3, TAP2, MTHFD2, PCSK1, BHLHA15, QKI, CALU, STAT1, CARD6, ZBP1, CIITA, CD274, AQP9, GRK5, SOCS3, CCL24, HLA-DMB, THBD, PHLDA2, VSIG1, MLKL, RGS2, SNN, S100A2, MUC5AC, TMC5, WARS, BTN3A3, CLCN4, OSBPL3, SLC41A1, STXBP1, SERPINB7, WISP1, CXCL5, S100A11, PMPA1, CXCL8, GLCCI1, CENPW, B2M, CLDN1, MCTP1, FCRL5, IGKC, VNN1, PKM, SLFN5, GRHL1, C8orf4, IQSEC1, PTAFR, PDE4B, IFITM1, BICD1, IGK, IGKC, IL1B, GJA4, MLIP, FAM83A, LOC100129518, SOD2, PARP8, ART3, FCGR3B, FCGR3A, OSMR, STRIP2, CXCL6, LIPG, MIR1908, FADS1, RPL22L1, DUSP7, LPGAT1, ST3GAL1, FXYD5, KLHL29, ELL2, PLAU, RAC2, NCOA7, TMEM92, PCDH17, RAB31, ASPH, AQP3, RILPL2, RHOQ, TRIM22, MME, BHLHE40, DNAJB9, RHOH, PF4, IER3, ITGB2, TMEM106A, GPX8, CEP112, AIF1, KCNE3, CD93, SEC24D, FOXQ1, ABCA12, GM2A, GJA1, ADA, TRIM29, DNAJC10, PLAUR, PLA2G7, RASGRP3, GIMAP2, HGF, BAG2, CYAT1, IGLV1-44, IGLC1, UNC5CL, MSN, REG1A, LOC101928916, NNMT, PECAM1, FFAR2, SEC14L1, TSPAN5, AGPAT4, LY96, ZAK, CASP5, LOC401317, CREB5, IGHV4-31, IGHM, IGHG3, IGHG1, IGHA1, CBR3, LYSMD2, TGFBI, PMAIP1, FAM92A1, DRAM1, DERL3, SEMA4D, LINC00888, CSF2RB, XBP1, EHBP1L1, MXRA5, IL1A, MAFB, ARHGDIB, LOC643733, MMP1, KLF7, CDC42EP2, IGLV1-44, IGLC1, PRDM1, ELOVL5,</p>	<p>DEFB1, WDR78, ANK3, PHLPP2, BSG, MIR4680, PDCD4, PIWIL2, FGFR2, TMEM38B, RETSAT, MT1E, RUNDC3B, ABCG2, NAAA, SETD9, APPL2, TSPAN7, GUCA2B, CDKN2B, C15orf38-AP3S2, AP3S2, LOC286052, TMEM37, NEURL1B, SLC35G1, FCGRT, ATP23, ACSF2, HSD3B2, CYP2B7P, CYP2B6, PDK4, AGFG2, METTL7B, SAMD13, LOC101929340, C2orf88, MT1H, PHYH, LEAP2, SLC4A4, EPB41L4B, RRAS2, HSD17B2, SELENBP1, RAVR2, PLA2G12B, SLC36A1, LOC100506558, MATN2, SLC38A4, PRKG2, P2RY1, DPP10-AS1, LOC102724250, LOC101930059, NBPFF15, NBPFF11, NBPFF1, SLC51B, DEPDC7, SLC39A5, EXPH5, SYTL2, CLYBL, RAB40B, PXMP2, SLC19A3, MCOLN2, FAM162A, MPND, ADGRA3, TP53TG1, MYO1D, ADIRF, PKIB, PDLIM2, FMO5, LRRC31, LOC101927157, NIPAL1, OSBPL1A, PMM1, SLC16A1, ADH1A, TMEM56, CPT1A, TMEM98, MT2A, ZNF91, HNMT, HMOX1, PBLD, FAM47E-STBD1, FAM47E, STBD1, ARHGEF37, ETFDH, EPHX1, CES2, CLCN2, PDE6A, GALNT12, OAF, SLC20A2, LRRC19, MT1HL1, UGT2A3, MT1X, PTPRR, LRNR2, ACADS, MAOA, ABAT, PSD3, METTL7A, LOC101928274, VSIG10,</p>
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	<p>ITGA2, TNFSF13B, TMEM163, USP18, CCL20, LST1, AZGP1, NAMPT, KLF2, CR1, RASA4B, RASA4CP, RASA4, PAM, ADAMTS1, CLDN2, MAP3K8, TSPAN11, PDP1, TAGAP, OAS2, ANKRD22, SNCAIP, IGLJ3, IGLV1-44, CKAP2, IGLV@, IGLC1, INPP5D, SELL, TRABD, REG3A, ADGRE2, MTCL1, RGCC, SLC4A11, RIPK2, STEAP4, BLOC1S5-TXNDC5, TXNDC5, C2, PLXND1, PPBP, IL7R, SHCBP1, MIR6756, MCAM, MMP19, STC1, TFF2, PMP22, CEBPB, EPHA2, EGR3, GNB5, HELZ2, MAP9, FGR, APIP, TFF1, F2R, PRDX4, LAIR2, EHD3, CHSY1, CTSH, TPK1, ROBO1, COL6A3, BLVRA, CD300A, CCL18, CKAP2, IGLV@, IGLC1, TNFAIP8, ITGAM, ACP, ETV7, NHSL2, RNF145, THY1, MIR21, VMP1, CHST15, HS3ST1, HLA-DPB1, PROK2, COL15A1, HLA-DOA, IL1RN, TMTC1, IGKV1OR2-118, KRT6B, SH3BP5, SYTL1, FSTL1, PTPRM, CLEC4A, CXCL11, FPR1, TPRG1, COL4A1, DDIAS, SELPLG, GMFG, SFMBT2, SLCO1B3, PALM2-AKAP2, AKAP2, GRAMD2, OLFM1, BCL2A1, TMEM158, C4B_2, C4B, C4A, FCGR3B, DDX50, PTPRC, GPR65, EVI2B, KIAA0895, IGSF6, LDOC1, VWF, F2RL2, CSGALNACT1, HOMER1, DMBT1, NFIB, ELK3, CXCR2, SERPINB3, POU2AF1, GBP4, SERPING1, CKAP2L, SLAMF8, CD38, SLC9A7, TNFAIP2, KLHL5, CXCR4, RBP7, IKZF1, TNFSF8, PIK3AP1, IGHV3-23, IGHV4-31, IGHM, IGHG3, IGHG1, IGHD, IGHA1, IGH, IGHM, LINC00537, MNDA, SERPINB9, HSPA13, RNF213, SLC6A6, CASP4, LOC101928635, ALDH1A2, IGKV1OR2-108, CSF3R, LAMC2, GVINP1, NQO2, TIE1, DSG3, IGLJ3, IGLV@, IGLC1, GIMAP4, ME1, PRKCQ, Sep-06, SOCS1, FBXO6, TMEM173, C4BPA, EGR2, C1R, SELP, NCF2, RNF183, ECSCR, OAS3, CNRIP1, SHANK3, ORAI2, CLEC2B, NRAV, SLC25A37, ANKRD36, CCDC69, GRHL3, AIM2, HCAR3, ADGRG6, PLEKHO2, IRS1, IGFBP3, CLIC2, MMP9, INHBA, LOC100287413, GLYATL1, KLHDC7B, CALHM2, LRRC70, IPO11, TCF4, ADGRF5,</p>	<p>CA12, LOC101930053, LOC101930048, VLDLR-AS1, NHSL1, VIPR1, ITCH, SH3BGR2, SULT1A2, VAV3, BDH1, UGT1A3, UGT1A1, UGT1A4, UGT1A9, UGT1A5, UGT1A6, UGT1A7, UGT1A8, UGT1A10, PPARGC1A, RMND5A, SLC25A23, PDK2, CWH43, FAM213A, SCIN, RBP2, LYPD8, TEN1-CDK3, CDK3, TEX11, ZNF704, NAT2, CHRNA1, ASPG, AIFM3, CNGA1, PLCE1, TUBAL3, ADH1C, ACVR1C, AQP11, CA1, SUGCT, HHLA2, ASAP3, CHN2, ACER2, CHP2, UGT1A1, UGT1A4, UGT1A9, UGT1A6, UGT1A8, UGT1A10, PRR15, SOWAHA, TRHDE, TRIM36, BMP3, PITX2, GIPC2, SLC23A1, SATB2, UNC5C, NR5A2, STAP2, PPARGC1B, MEP1A, MOCS1, LOC339166, WSCD1, CHAD, BLOC1S1-RDH5, RDH5, SATB2-AS1, SLC5A11, EDIL3, LOC101930168, LOC100509620, AQP7, ACOT11, HPGD, TMEM72, PIGZ, PRLR, LOC389332, USP2, CEACAM7, SSTR1, FDX1, AGXT, MXI1, TINAG, EDN3, SLC16A9, RPS6KA6, MXD3, NWD2, FXD3, CLDN8, DPP10, EPB41L1, EPHX2, FAM151A, YME1L1, PPARG, LRP12, BRINP3, SEMA6A, CD177, IGSF9, ARHGAP44, SVOPL, TNNC2, LOC101927478, C17orf74, LOC101930361, LOC101929970,</p>
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		<p> AASS, SRD5A3, IL18R1, PDE10A, ABI2, IGFBP7, IL12RB1, ISG20, SAMHD1, RPS16P5, CBL, FAM30A, TFPI, TRERF1, AAED1, CLEC7A, JAK3, PIM2, HOOK3, PXDN, PRRC2C, APOL2, AREG, CD86, TFAP2C, BCAT1, COL3A1, PPM1K, GTSE1, TMEM154, C3, FOSL1, SLC2A3, CCND2, ADGRL4, CXCL10, PLA1A, CHST11, ASAP1, FAIM2, SLC28A3, NOD2, SAMSN1, BASP1, CD37, SERPINB4, SERPINB3, MZB1, SYTL3, CDC45, HIVEP3, LOC101928173, SEC22C, IL33, HEG1, SLFN11, LUM, DSE, KLK11, TUBB6, SLCO4A1, AGT, PLA2G2A, LINC00944, THEMIS2, LEF1, FAM49A, GNB4, CFI, TFEC, STOM, CSGALNACT2, KLK10, LOC101927933, LRRC8C, HLA-DQB1, CCDC88A, IGHV4-31, IGHM, IGHG4, IGHG3, IGHG1, IGHD, IGHA2, IGHA1, BANK1, PTGS2, GAL, HSPA6, TIFA, BGN, LOC102725526, IGHV4-31, IGHM, IGHG3, IGHG2, IGHG1, IGHA2, IGHA1, IGH, RGS5, SLC6A20, IGHV3-23, IGHV4-31, IGHM, IGHG1, IGHA1, CTLA4, FBLN1, PLEKHA2, COL1A2, TNC, CKAP2, IGLC1, KCNA3, FLI1, BCL6, CD82, CEMIP, RORA, LOXL2, KCNN3, FPR3, ITPR1, BST2, CFLAR, LAX1, EIF5A2, CCR2, PMCH, CCL4, CYR61, C11orf96, LOC101927069, FGD2, ACSL4, CPVL, SIRPA, HHEX, OTUB2, NR4A2, GUCY1B3, MIR146A, FAM65B, FEZ1, SWAP70, CD53, CNOT9, GABRP, ENTPD1, FPR2, AZGP1P1, AZGP1, IL10RA, STX11, RBMS1, NUP210, TACSTD2, DUSP2, IFI44, TREM1, ANKRD36BP2, SLAMF7, IGLJ3, ICAM1, IGHV4-31, IGHM, IGHG4, IGHG3, IGHG1, IGHD, IGHA2, IGHA1, IGH, KLHL6, WDFY4, MSANTD3-TMEFF1, TMEFF1, APBB1IP, ADAM28, CYP4X1, LOC727820, EDNRA, ARHGAP9, ST3GAL5, LY9, CDH11, LINC01215, SELE, VSNL1, EGR1, SLC16A14, HLA-DOB, PRICKLE1, FZD2, SCD, RAB8B, PARVB, LAMC1, SLC9A1, C5AR1, GIMAP8, MSTO1, LINC01210, TNFSF11, SIRPB2, EAF2, MPEG1, LDB2, MUC1, CEP170P1, CEP170, SLC2A14, SLC2A3, IL1R1, </p>	<p> CHRFAM7A, CHRNA7, LOC101928405, MIR1247, DIO3OS, AMER3, CDHR5, PDXP, SH3BP1, PTGDR, LINC01268, SH3RF2, FAM120AOS, NAT8B, NAT8, SLC51A, CHP1, NAT8B, EIF4EBP2, TRDV3, PDZD3, HEPACAM2, TINCR, FGFR3, ZNF575, CA7, LOC727916, NOBOX, HSD11B2, MEP1B, LINC01133, SLC1A7, XPNPEP2, LDHD, HAVCR1, THRA, CNTN3, RHOV, CREB3L3, SIX5, FLJ22763, DIO3OS, SLC9A3, NDUFC1, AMN, GBA3, ANKRD9, GRAMD4, MS4A12, G6PC, ANKH, PLIN1, ABCC13, OR2H1, NXPE4, PPP1R14A, ZBTB7C, PRAP1, CAMK2N1, ZFYVE28, HOXA5, CD160, INPP5J, GSTA1, MPP7, ITPKA, FAM189A1, CELA3B, CYP2B6, CDC42BPA, SCUBE2, C1QTNF1-AS1, SLC3A1, PRSS23, NR6A1, TGM5, OR51I1, ENPP1, MBNL1-AS1, B4GALNT2, SOX9-AS1, C16orf95, PHGR1, APC, SLC26A3, LTK, A1CF, SPHK2, TARP, SPIB, CES3, BDH2, ADH6, CDHR1, LTBP3, AVIL, LOC102724612, FRAS1, PARD3, GXYLT2, BEST4, NIT1, GHR, ATP8A1, TMEM221, NVL, PBX1, ABCB11, CKB, NTRK2, ISX, OTC, ST6GAL2, CDX2, C16orf78, GCNT2, RGS3, MMP28, TADA3, WNT7B, HES5, C2orf54, ADD3-AS1, PRKAG2-AS1, SBF2-AS1, KCTD4, ZBTB10, AK5, </p>
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		<p>MIR145, IGHV4-31, IGHA1, HTR7P1, SPI1, NOVA2, CDC25C, ARSK, SLC18A1, SLC25A31, COPA, PTPRCAP, LOC286121, NMT1, MUC5B, LOC285847, MIF-AS1, CCNF, RCSD1, ZBTB24, C18orf54, ROPN1L, CMKLR1, STON1, SCARA3, FCRL4, IQGAP3, PAX5, C17orf51, WDR91, NOS3, ACAP1, MEOX2, MAST1, MPDZ, LILRA5, SNHG24, LOC339803, WWTR1, ADGRL3, FGF12, DOCK10, KRT17, JUP, ROBO2, CLECL1, STAP1, NLRC4, FAM20A, ATF6B, MEG3, BHMT2, MAP4K1, TBX6, PARP15, MCPH1, ACKR1, FERMT2, PLCXD3, PKHD1L1, MIR646HG, KIAA0754, CDKN2A, BTN2A2, PYCRL, CCK, CCDC80, GAGE3, S100B, TRPC3, NME5, PDLIM7, ZNF264, LOC102724660, EFCAB3, AICDA, ZNF568, RASSF8, LAMA2, POU2F2, GLT1D1, MYBL1, NNMT, LOC101928510, RASSF9, EGFL6, WASIR2, C4orf45, GPR82, PTPN12, P2RX7, KRT6C, KRT6B, KRT6A, SNORA11E, SNORA11D, MAGED4, MAGED4B</p>	
GSE73661	IBD	Upregulated (112)	Downregulated (87)
		<p>SLC6A14, C8orf4, S100P, CD55, REG4, EPHA2, C2, AREG, PHLDA1, LPCAT1, DAPP1, TRIM29, NR4A2, MUC5B, SNORA7B, PARP8, , IL1B, TIMP1, TRIM22, NR4A1, SNORD3D, SNORD3C, SNORD3B-2, SNORD3A, SNORD3B-1, ARNTL2, CDH3, PCSK1, CCL20, SLC28A3, SERPINB5, CXCL1, PI3, TFF1, OLFM4, SOCS3, VNN1, CATSPERB, FOS, CXCL2, PTCH2, SPINK4, LCN2, CYR61, IL1RN, EGR1, CFB, FOSB, APOL1, PDZK1IP1, HBEGF, ABCA12, RGS2, MIR221, KCND3, PFKFB3, TRIM40, GABRP, HLA-DRA, HLA-DQA1, UBD, DUOX2, OAS2, SLCO1B3, PTGS2, NOS2, SLC7A11, RNU5B-1, LOC102724428, SIK1, DUOXA2, ITGA5, IDO1, IRAK3, C4BPB, SLC2A3, WARS, KYNU, CLDN1, REG3A, VSIG1, SELP, OSMR, IL1A, TNC, SAA2, DEFA5, GBP4, STEAP4, CXCL11, SERPINB7, DMBT1, TCN1, MMP7, TNIP3, MMP3,</p>	<p>APOBEC3B, PDE6A, C1QTNF3-AMACR, AMACR, BRINP3, VLDLR, CYP2B7P, PHLPP2, NAALADL1, BMP3, BMP3, ENPP1, PRKG2, SLC22A5, SLC38A4, AQP8, PDK2, DPP10, SLC35G1, WDR78, CNTFR, TMEM63C, RMDN2, HOXA6, FGFR2, CDKN2B, RPS6KA6, SLC51B, PBLD, HSD17B2, TUBAL3, LRRC19, SLC4A10, TRHDE, TMEM37, TMEM56-RWDD3, TMEM56, CYP2B6, CNTN4, GBA3, SLC16A1, SLC17A4,</p>

		DEFA6, TGM2, CEMIP, SELE, DSG3, C3, CFI, CXCL8, S100A8, REG1A, VNN2, CD274, MMP1, CHI3L1, AQP9, SERPINB3, PLEK, MMP12, SERPINB4, REG1B, MS4A1, CXCL10	SLC30A10, SLC10A5, PAQR5, ABCG2, GXYLT2, UGT2A3, MT1H, MT1F, SLCO4C1, EDIL3, MT1M, CNTN3, MT1G, ACSF2, DHRS11, OTOP2, SATB2-AS1, ABCB1, SLC51A, HMGCS2, PPARGC1A, CD177, HNF1A-AS1, B4GALNT2, MEP1B, SLC26A2, LINC01559, XPNPEP2, MEP1A, GUCA2B, PADI2, TRPM6, TMEM236, FSIP2, CHP2, HSD3B2, GHR, GUCA2A, TMIGD1, ANPEP, ADH1C, SLC16A9, CLDN8, CWH43, PCK1,
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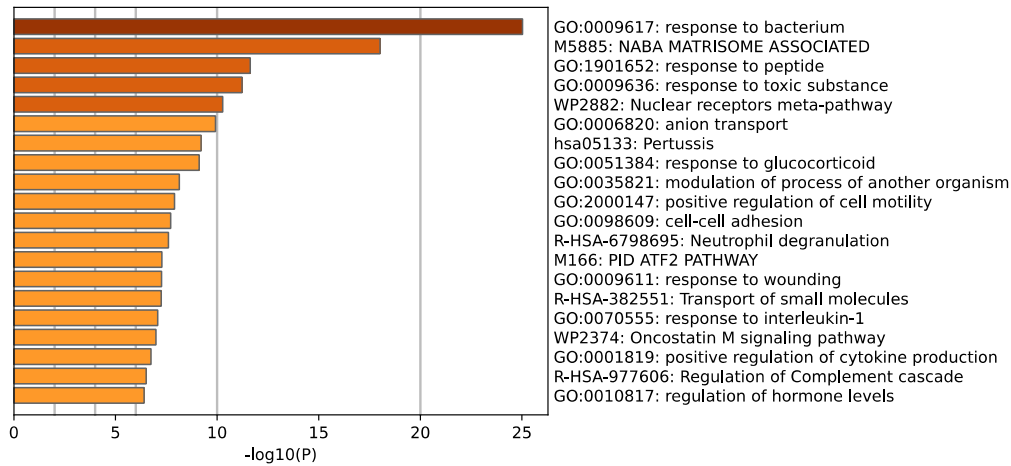
Table S3: List of intersected 174 DEGs from GSE14580 and GSE73661

List of intersected 174 DEGs from GSE14580 and GSE73661
SLC6A14, CXCL1, KYNU, LPCAT1, HMGCS2, DUOXA2, DAPP1, CFB, REG4, ARNTL2, CD55, SLC22A5, TCN1, MMP12, CXCL2, TNIP3, PDZK1IP1, DUOX2, IRAK3, PADI2, C1QTNF3-AMACR, AMACR, VLDLR, C4BPB, NOS2, SPINK4, MMP7, SLC26A2, IDO1, ABCB1, APOBEC3B, TIMP1, PI3, SLC7A11, VNN2, PFKFB3, PCK1, PHLDA1, OLFM4, RMDN2, S100A8, CDH3, MT1F, AQP8, MT1G, APOL1, LCN2, CHI3L1, TRPM6, SERPINB5, KCND3, DHRS11, S100P, GUCA2A, TGM2, PAQR5, SLC17A4, MT1M, MMP3, PCSK1, SLC30A10, NAALADL1, CD274, AQP9, SOCS3, VSIG1, WDR78, RGS2, PHLPP2, WARS, SERPINB7, CXCL8, CLDN1, FGFR2, VNN1, C8orf4, ABCG2, IL1B, PARP8, OSMR, GUCA2B, CDKN2B, TMEM37, SLC35G1, ACSF2, TRIM22, HSD3B2, ABCA12, MT1H, TRIM29, HSD17B2, REG1A, SLC38A4, PRKG2, SLC51B, IL1A, MMP1, CCL20, OAS2, REG3A, STEAP4, C2, EPHA2, SLC16A1, TFF1, PBLD, IL1RN, CXCL11, PDE6A, SLCO1B3, LRRC19, UGT2A3, DMBT1, SERPINB3, GBP4, DSG3, SELP, PPARGC1A, PDK2, CWH43, TUBAL3, ADH1C, AREG, CA1, C3, SLC2A3, CXCL10, SLC28A3, CHP2, TRHDE, CFI, PTGS2, TNC, CEMIP, MEP1A, CYR61, SATB2-AS1, EDIL3, NR4A2, GABRP, SELE, EGR1, SLC16A9, PLEK, CATSPERB, TRIM40, RPS6KA6, CLDN8, DPP10, SERPINB4, ITGA5, BRINP3, CD177, SLC51A, MEP1B, NR4A1, REG1B, XPNPEP2, CNTN3, GBA3, FOS, MS4A1, CYP2B6, ENPP1,

B4GALNT2, GXYLT2, GHR, FOSB, DEFA5, DEFA6, TMEM63C, HBEGF, CNTN4, MUC5B, ANPEP

Figure S1 Gene term enrichment analysis of the 174 shared DEGs of dataset GSE14580 and GSE73661

(A) Pathway analysis:



(B) Transcription factors:

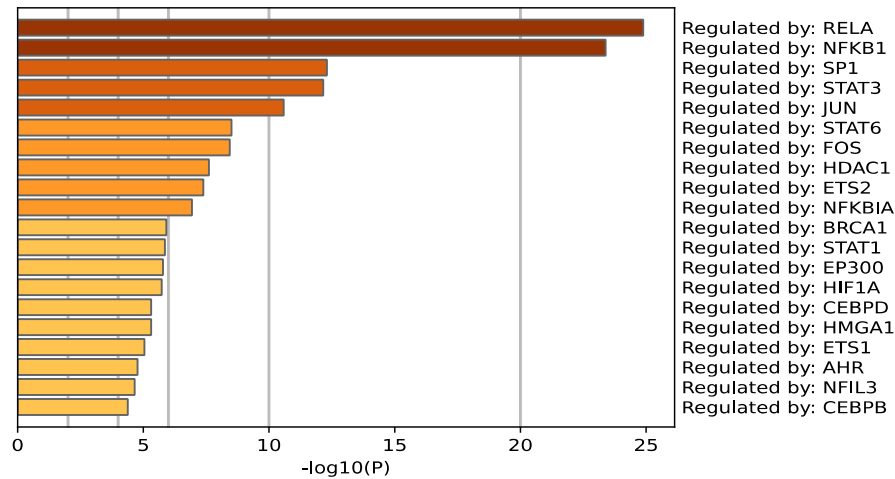


Table S4: List of genes that are differently expressed in GSE14580 (RE vs NRE)

Dataset	Condition	List of genes (437)	
GSE14580	RE	Upregulated (98)	Downregulated (339)

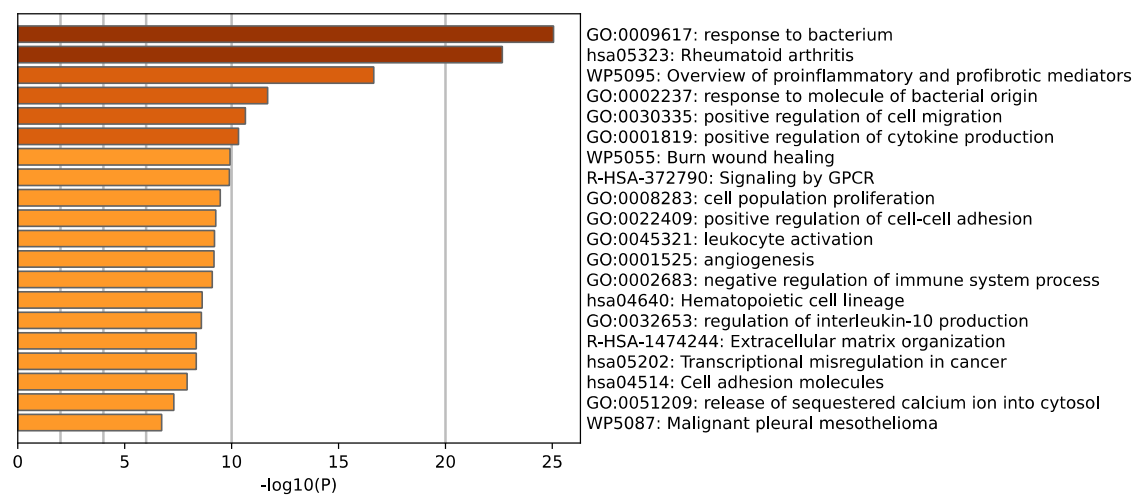
		<p>FAM86C1, SIRT4, BBOX1, LOC105371226, DLX5, VASH1, PDZD3, SPACA9, HIST1H2BB, TAL1, GOLGA6L6, LINC01241, LOC100505824, OR10A4, GDPD2, THSD4-AS1, RPUSD3, GUCA2A, TTC34, LOC284630, DIP2B, TRIM8, CYP2C9, DKFZP434L187, NAV3, OR2B2, POU2F3, IVL, CACNB2, CNGA3, LARP4B, PCDHGA11, PCDHGC3, SH2D6, GUCA2B, LINC01029, ADGRF1, IQGAP2, SLC26A3, SVOP, C3orf62, CHP2, PDZRN3, HOXB8, GART, LINC00901, CRB1, PAX7, C9orf84, ZNF443, RECK, CHST9, CA1, KLK15, PDSS2, LINC00550, C6orf1, PNPLA1, DCST2, MIR7-3HG, ANKS1B, IDUA, HAGLR, COG6, LOC100507654, LINC00853, SLCO1C1, DCT,</p>	<p>HGF, PDPN, KATNAL1, IGFBP5, PDLIM4, ABTB1, PTGFR, PAPP, ETV1, ZEB2, KLHL6, IL13RA2, IL4I1, TNC, TFPI2, NRCAM, MEIS1, AKAP12, DZIP1, IL11, MGC40069, TRAC, TRAJ17, TRAV20, TRDV2, YME1L1, ERO1B, ANGPTL2, , MAF, WNT5A, RGS5, RNF24, SPG20, RHOJ, IL7R, RASSF9, CYLD, CSF3, TMOD1, FBN1, FGF7P3, FGF7P6, FGF7, SPOCK1, TYSND1, KCNN3, TMEM207, TAGAP, XCL2, XCL1, ZNF559, IGLV6-57, IGHV4-31, IGHM, IGHG3, IGHG1, IGHD, IGHA1, SLA2, SNX29, Sep-06, C1S, CBARP, ZNF287, WTAP, RAB39B, DMC1, KIAA1462, PTGS2, C11orf96, S100A8, MMP3, CXCL6, SMIM4, CD86, STC1, IGHV4-31, IGHM, IGHG3, IGHG1, IGHD, IGHA2, IGHA1, FLT1, LILRB3, BICC1, IGHD, TXLNB, MR1, FAP, DUSP2, IGHV3-23, IGHV4-31, IGHM, IGHG1, IGHA1, SSX4B, SSX4, LILRA2, CXCL5, IL23A, TRBV19, IL6, GPR183, IL24, INHBA, ANGPT2, RGS1, AOX1, SDC2, CCL2, CLEC4E, FCGR2B, ARHGAP25, ZSCAN12, IGHV3-23, IGHV4-31, IGHM, IGHG3, IGHG1, IGHA2, IGHA1, LILRB2, IGLJ3, CKAP2, CCL8, DKK3, LOC101927933, LRRC8C, MME, TNFRSF11B, FYB, FAM49A, ZNF613, MYO1G, MMP10, CYAT1, PLAUI, CCL22, LOC285957, LOC102725271, NTM, LOC101060091, KANK3, IGK, CHST11, MEOX2, RBMS1, P2RY13, LINC00888, IGKC, CALCRL, MANEA, TNFRSF4, VPS53, STEAP4, CSF2, IGLV1-44, PCBP3, MAST1, SYNE1, GLT1D1, LOC100293211, GLIS3, IGK, IGKC, SCNN1G, SLC5A12, NRP1, ZEB1, SLC6A6, CCDC88A, NRG1, DCN, MIPOL1, PRKAA2, THBD, IGHM, SLC6A15, IGLJ3, GPR37, P2RX7, SELE, SNORA11E, SNORA11D, MAGED4, MAGED4B, BRE-AS1, PMP2, JAK3,</p>
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		<p>CDH26, C8G, GP5, CDHR5, IGHG1, KLHL20, RGL3, LINC01568, LOC643201, PDZK1, LOC102723648, DEFB105B, DEFB105A, NAALAD2, AKAP14, MIR99AHG, PSMG4, METAP2, RP1, TCF24, BEST4, RETNLB, ADAM30, LINC00427, LOC253573, NLRP2, EBF2, AQP8, LOC441666, LOC100996809, HLA-DRB5, HLA-DRB4, HLA-DRB3, HLA-DRB1, CLDN8, XIST, HLA-DQB1</p>	<p>MIR100HG, JAM3, HYPM, LILRA6, VCAN, TLR2, GZMK, ZNF710, DNAH1, LOC102723407, IGHV4-31, IGHM, IGHG4, IGHG1, IGHA2, IGHA1, CTB-12O2.1, S1PR3, TCF4, MECP2, IGLC1, FGF7, FZD2, PPM1K, DNAAF1, MAK, FST, CD84, S100B, ACAP1, PTHLH, PI15, COL8A1, IGHV4-31, IGHA1, DIO2, NR4A3, SAMD4A, EBF1, SERPINE1, NSUN3, ITPR1, TNFAIP6, TIMP3, DPY19L2P2, SCARA3, IGSF6, IGLL5, LOC102725526, IGHV4-31, IGHM, IGHG3, IGHG2, IGHG1, IGHA2, IGHA1, IGH, THSD7A, CCL18, GABRA2, GAS1, TEAD2, RGS4, KCNJ15, ZMYM2, TREM1, C5orf47, MCF2L2, RTN1, IGHV4-31, IGHM, IGHG1, IGHA1, BCL2A1, ERFE, CCL5, AGK, CP, FLYWCH1, IKZF3, SV2B, PTPRC, EDNRA, PROK2, MMP8, SEMA3A, CYR61, SEL1L2, GPR37, IGKV1OR2-108, RFTN2, CLMP, PKHD1L1, LILRA3, AQP9, LOC100506538, IFI44L, PACRG, PLD5, P2RY8, WNT16, MIR675, H19, PCOLCE, ZNF391, IGHV4-31, IGHM, IGHG4, IGHG3, IGHG1, IGHD, IGHA2, IGHA1, IGH, OMD, TPSAB1, SLC25A53, LINC01424, LOC780529, CYP24A1, MSX1, IGLJ3, CKAP2, IGLV@, IGLC1, MDFIC, RASSF5, ABCC9, IGLJ3, IGLV1-44, CKAP2, IGLV@, IGLC1, SH2D1A, TRPC4, ACSL4, FCRLB, CD28, FAM20A, COL12A1, RASGRF1, TRDN, FPR2, FAM126A, CDH19, SLC16A10, CHI3L1, ZNF80, MBLAC2, MNDA, EBI3, CCL3L3, CCL3L1, CCL3, FGF2, CNOT2, PNOC, PRRX1, SMARCA1, RBMS3, UMODL1, ACOD1, WDR17, PAK3, GALNT15, LOC101927482, LCA5, ADAMTS1, COL6A1, SAMSN1, CCDC141, CEMIP, CFTR, IGHM, IGHG1, IGHA1, TENM3, PARPBP, LOC101928728, TLR8, ITPR2, HCAR3, C17orf78, CXCL8, ART4, ADAMTS2, SIX4, CYP26B1, EMB,</p>
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			SLC25A30, ZNF208, PADI4, NAPS B, MYL9, LOC645485, IGHV4-31, IGHM, IGHG4, IGHG3, IGHG1, IGHD, IGHA2, IGHA1, FNDC1, AGTPBP1, IGHM, IGHG1, NKAIN2, AGTR2, ZNF826P, EBF3, GABRB1, FCRLA, RASSF8, HSF5, NAA16, GREB1, VMO1, LILRB1, ZNF678, NLGN4Y, CYP7A1, NPY2R, MCF2, RGS13, KLK7, MMP1, ASPN, ERAP1, C11orf58, KRT6C, KRT6B, KRT6A, IGHV1-69, STAP1, UGT2B17,
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Figure S2 Gene term enrichment analysis of the 437 DEGs of dataset GSE14580 (RE vs NRE)

(A) Pathway analysis:



(B) Transcription factors:

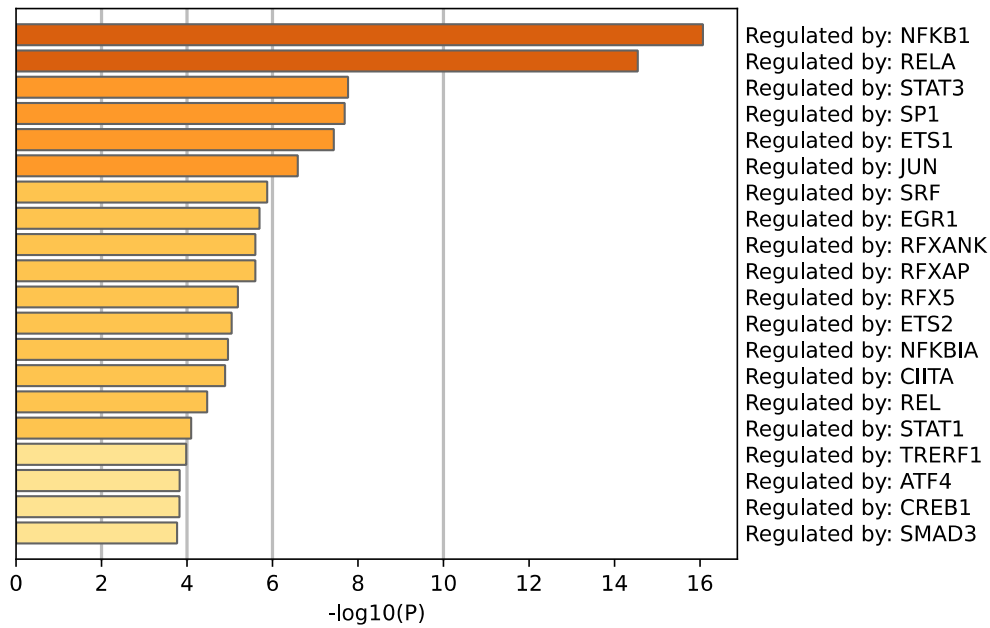


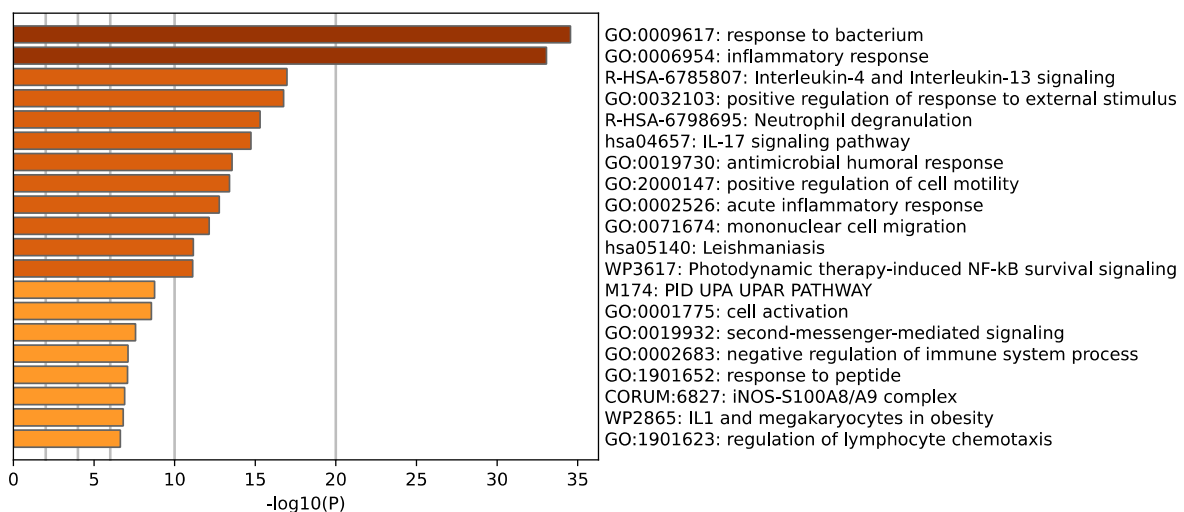
Table S5: List of genes that are differently expressed in GSE73661 (RE vs NRE)

Dataset	Condition	List of genes (138)	
GSE73661	RE	Upregulated (28)	Downregulated (110)
		SLC26A2, AQP8, CHP2, PADI2, UGT2A3, ABCB1, MT1M, HAVCR1, ADH1C, TMIGD1, GUCA2A, CWH43, TRPM6, GLRA2, PCK1, CPA6, BEST2, HMGCS2, GUCA2B, HEPACAM2, CAPN13, CA7, SCNN1B, CA1,	FCGR3B, FCGR3A, STC1, KYNU, IGK, IGKC, SCFV, IGHM, SCFV, IGHV3-30, SELE, , ITGAX, CXCL8, IGKC, SCFV, IGLJ3, IGHM, IGHA1, SCFV, C14orf99, IGK, IGKV3-20, IGHV3-23, IGHV3-30, IGHV3-48, IGHV3-69-1, SLC7A11, ADGRE2, IGHM, IGHV3-48, IGHV3-69-1, IGHM, IGHG1, IGHD, IGHA2, IGHA1, IGHA2, IGHA1, IGH, SCFV, IGLJ3, IGHV3-23, IGHV4-31, IGHM, IGHG2, IGHG1, IGHA1, SCFV, C14orf99, IGK, IGKV3-20, IGHV3-23, IGHV3-30, IGHV3-48, IGHV3-75, IGHV3-69-1, IGHV3OR16-7, PIM2, CSF3R, SAA2, MMP10, SCFV, IGLJ3, IGHV3-23, IGHV3-41, IGHV4-31, IGHM, IGHG2, IGHG1, IGHA1, IGH, C14orf99, IGK, IGKV3-20, IGHV3-23, IGHV3-48, IGHV3-75, IGHV3-69-1, IGHV3OR16-7, AQP9, IGLJ3, IGHV3-23, IGHV4-31, IGHM, IGHG1, IGHA1, SCFV, C14orf99, IGK, IGKV3-20, IGHV3-23,

		ZG16, OTOP2, ABCG2	IGHV3-48, IGHV3-69-1, IGHV3OR16-7, PLAUI, S100A8, S100A9, SCFV, IGLJ3, IGHM, IGHG1, IGHD, C14orf99, IGHV3-48, IGHV3-69-1, IGHA1, SCFV, C14orf99, IGHV3-48, IGHV3-69-1, FCRL5, IGHV3-69-1, IGHV3OR16-7, CXCR1, CXCL1, MMP3, SLC6A14, MIR155, MIR155HG, LOC102723407, IGHV4-31, IGHM, IGHD, IGHA2, LOC102723407, SKAP2, IGHA2, IGHA1, IGH, CHI3L1, IGHV3-48, IGHV3-69-1, IGHV3OR16-7, TNFRSF17, CYTIP, SERPINE1, TNIP3, VNN2, SRGN, FPR1, FCGR1CP, FCGR1B, FCGR1A, LAX1, NCF2, RAB31, SLAMF7, SAA1, CXCR2, MNDA, IL1B, STEAP4, PLEK, MMP12, FPR2, ABCA12, TREM1, PLA2G7, CCL4L1, CCL4L2, CCL4, CCL4L1, ACSL4, SELP, CD274, GBP5, VSIG1, ANXA1, IL6, SERPINB3, MMP1, FCGR2A, SERPINB4, OSM, PTGS2, CEMIP, FCGR2C, FCGR2B, OSMR, IL13RA2, JCHAIN, CCL2, CCL2, SLC26A4, NOS2, TNFAIP6, MMP9, HCAR3, EVI2B, MMP7, SERPINB7, S100A12, CCL18, TCN1, DUOXA2, SERPINA3, INHBA, INHBA, CXCL9, ACKR4, CD180, LY96, CD79A, IDO1, IGSF6, IGFBP5, TNC, C4BPA, SELL, DSG3, LCN2, REG1B, CXCL10, CXCL13
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Figure S3 Gene term enrichment analysis of the 138 DEGs of dataset GSE73661 (RE vs NRE)

(A) Pathway analysis:



(B) Transcription factors:

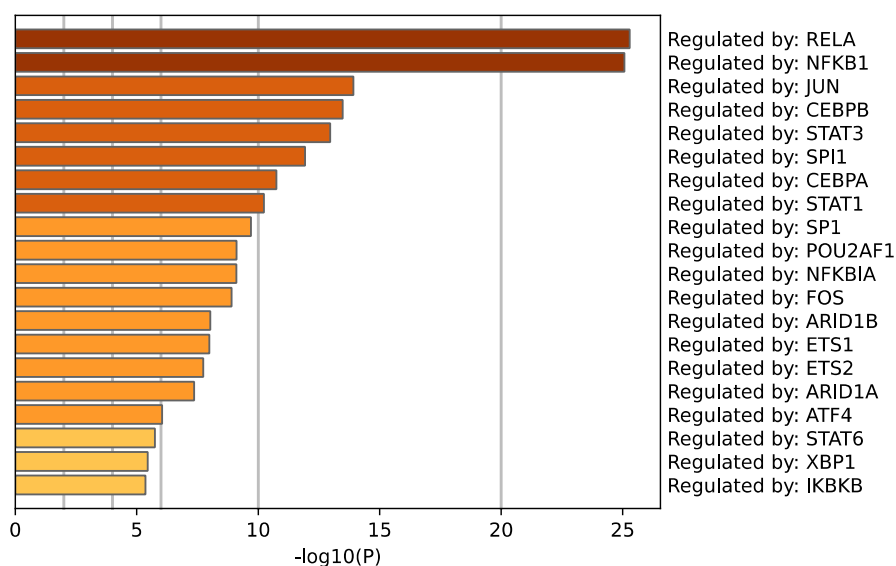
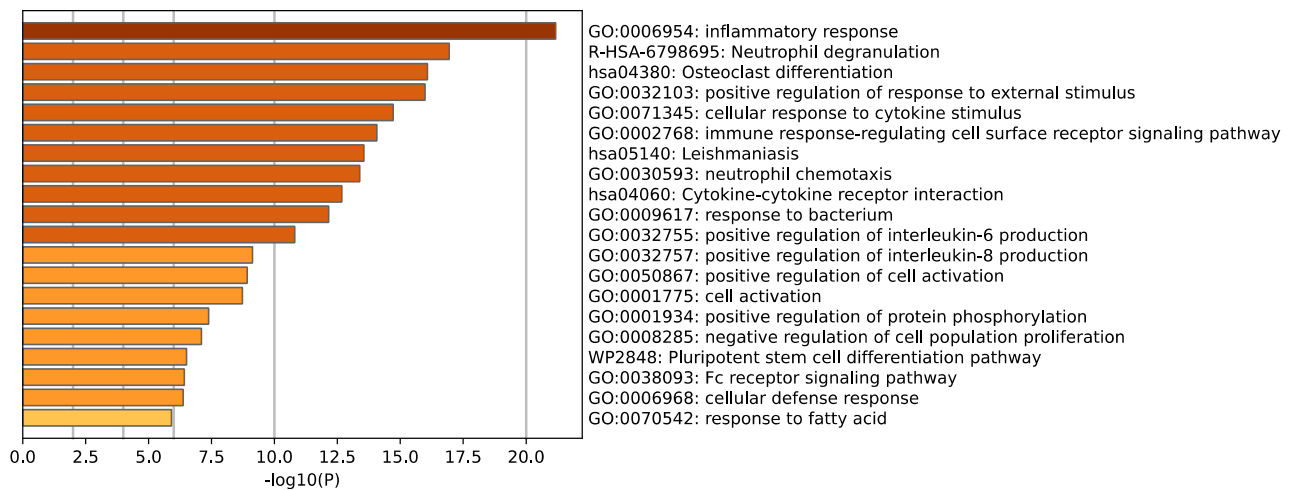


Table S6: List of genes that are differently expressed in GSE12251 (RE vs NRE)

Dataset	Condition	List of genes (88)	
GSE12251	RE	Upregulated (7)	Downregulated (81)
		WNK2, CNTN3, ZBED3, HAPLN1, DYRK1A, PCDH20, HLA-DRB4	G0S2, , HCAR3, LILRA3, TLR2, STC1, KCNJ15, IL1B, FPR2, APOBEC3A_B, APOBEC3A, IL1RN, PTGS2, TNFAIP6, TREM1, TNFRSF11B, CREB5, CSF3R, BCL6, NAMPT, C5AR1, NKAPL, ACSL1, CEMIP, FCGR1B, OSM, FPR1, ARL11, CXCR1, CMTM2, OLR1, SRGN, CXCL8, IL11, FCGR3B, FCGR3A, PROK2, LOC100129518, SOD2, TNFRSF10C, FCN1, CXCL11, PI15, TAGAP, PLEK, ADGRG3, PAPPA, STEAP4, PDE4B, DGAT2, MNDA, BCL2A1, GLT1D1, LILRA5, AQP9, FCGR3B, LOC106146153, FCGR1CP, FCGR1B, FCGR1A, MGAM, S100A12, CYP4F3, FFAR2, CXCR2, CLEC7A, IFIT2, LOC401317, CREB5, INHBA, WNT5A, LILRA2, TFPI2, SIRPB1, LILRB2, CLEC4D, FCGR2C, CLEC4E, IL18RAP, SELE, ACOD1, IL1A, GPR84, HGF, SLC1A3, NCF2, MME, EREG

Figure S4 Gene term enrichment analysis of the 88 DEGs of dataset GSE12251 (RE vs NRE)

(A) Pathway analysis:



(B) Transcription factors:

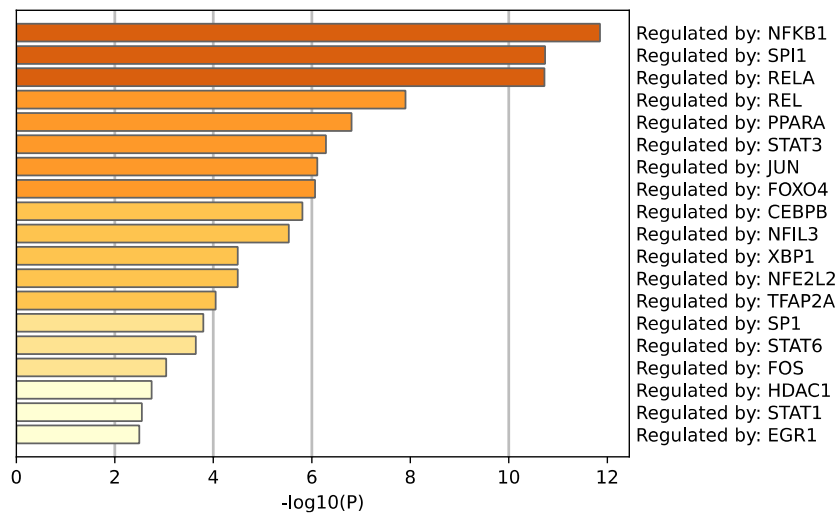


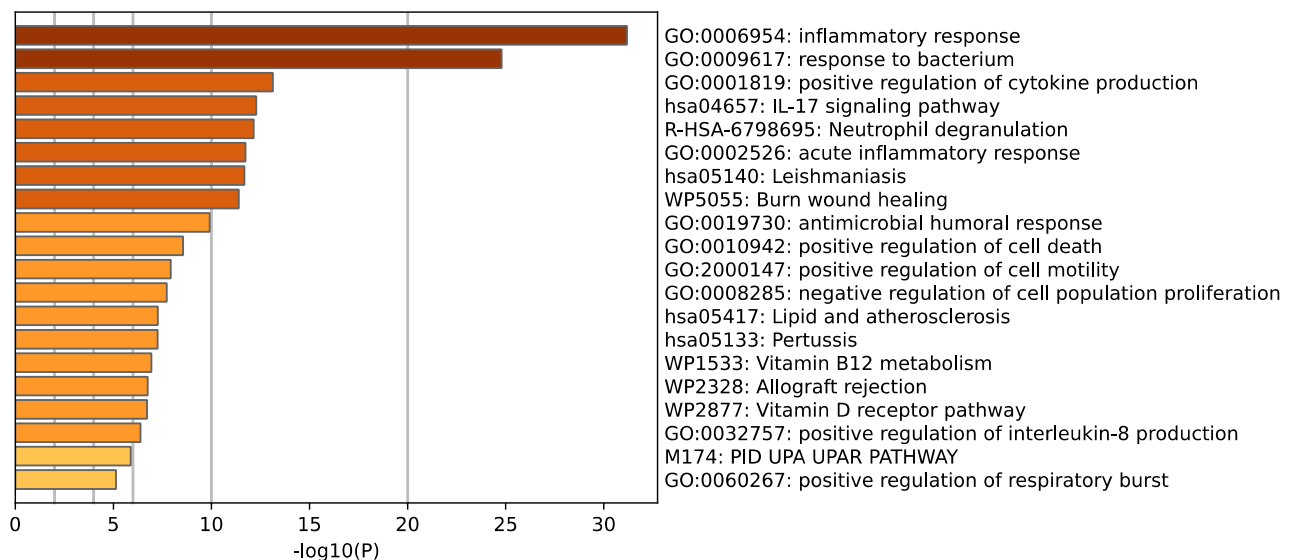
Table S7: List of genes that are differently expressed in GSE23597 (RE vs NRE)

Dataset	Condition	List of genes (129)	
GSE23597	RE	Upregulated (16)	Downregulated (113)
		LOC101929148, TTY14, MCMDC2, FAM189A1, C2orf82, EIF1AY, HLA-DQA1, UGT2A3, WSCD1, NTRK2,	CXCL5, CXCR2, HLA-DQB1, LOC106146153, SRGN, NAMPT, TAGAP, FCGR3B, RGS5, FFAR2, CSF3R, AQP9, LOC101060835, HLA-DQB1, SPP1, LYZ, S100A8, FPR1, LOC401317, CREB5, LOC100509457, HLA-DQA1, FPR2, TREM1, CLEC7A, CDC42EP2, MNDA, CHI3L1, CCDC3, ADGRF5, FCGR2A, KCNJ15, HCAR3, OSM, TNFAIP6, C4B_2, C4B, C4A, CXCR1, FCGR3B, FCGR3A, IGHV4-31, IGHM, IGHG4,

		TXLNGY, C7orf57, USP9Y, RPS4Y1, DDX3Y, CNTN3	IGHG3, IGHG1, IGHD, IGHA2, IGHA1, IGHM, FAP, S100A9, NCF2, KYNU, COL8A1, , CTHRC1, IGHM, IGHG1, IGHA1, IL1B, CXCL1, CMTM2, SAA2-SAA4, SAA2, SAA1, SELE, LCN2, CXCL8, G0S2, VNN2, LPL, PRRX1, NLRC4, HGF, INHBA, TNIP3, MGAM, BCL2A1, ADAMTS2, CLEC4E, IGHM, IGHG1, LRRC25, PROK2, MSX2, PHACTR1, SAA2, SAA1, TNFRSF10C, GAS1, LOC100129518, SOD2, MZB1, TGM2, IGLV1-44, VNN1, VNN3, DUOXA2, FCGR2C, SAMD9L, LILRB2, IGHV4- 31, IGHM, IGHG4, IGHG3, IGHG1, IGHD, IGHA2, IGHA1, IGH, COL7A1, CCL3L3, CCL3L1, CCL3, ABCA12, IL1RN, IGFBP5, CCDC88A, GBP5, IGK, IGKC, TCN1, ADGRF1, CSF3, IL1A, SERPINE1, CXCL6, STS, FGF7, GJA4, FAM30A, IGHV4-31, IGHA1, IGLV6-57, FYB, PLEK, MMP3, PTGS2, PDPN, XIST, CD300A, IL24, TLR8, REG1A, IL13RA2
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Figure S5 Gene term enrichment analysis of the 129 DEGs of dataset GSE23597 (RE vs NRE)

(A) Pathway analysis:



(B) Transcription factors:

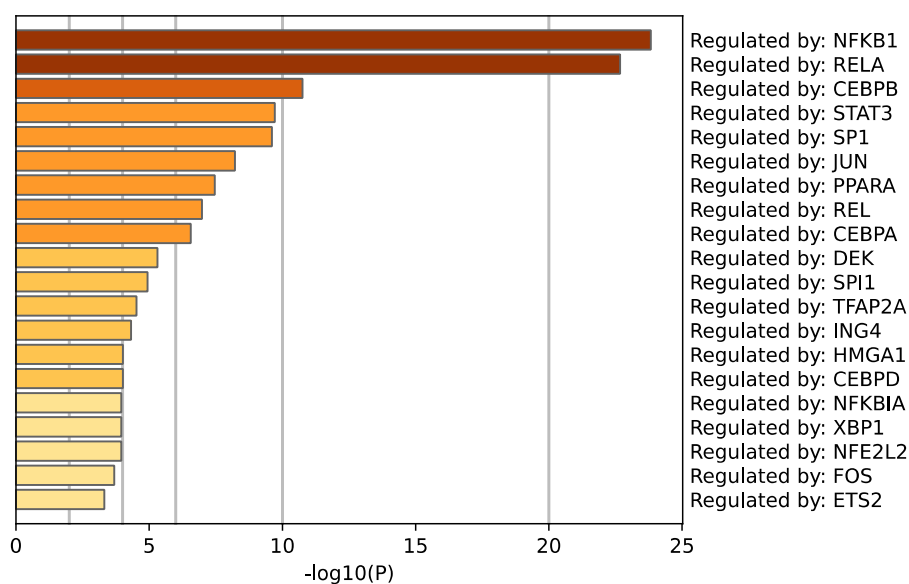


Table S8: List of genes that are differently expressed in GSE111761 (RE vs NRE)

Dataset	Condition	List of genes (2789)	
GSE111761	RE	Upregulated (1282)	Downregulated (1512)
		PLCD3, KLK1, KCNV1, CNTNAP2, LOC145837, PLEKHH1, BAIAP2L2, MYO1A, METTL7B, SGK2, FGFR3, F2RL1, C14orf176, SEMA4G, ENDOD1, CLDN8, BEST4, TMEM184A, PCSK6, FAAH, WSCD1, KBTBD11, GDA, ATG4D, LOC643650, SERF1B, GPD2, AKR1B10, PTPN20B, MALL, LRRC1, ANKS4B, THRB, RPRML, ARHGAP32, C19orf33, ACOT11, GNA11, SERF1A, GPR153, C11orf86, DHCR24, TACC2, ASL, FOXP2, VILL, GPR125, FAM47E, FLNB, CYCS, GFPT1, SVOP, C19orf21, LOC389332, GPR35, C11orf52, FLJ35024, TCF7L2, ACOX2, CBLC, ADAP1, FGF9, DHRS4L1, SERINC2, AKR7L, KAZALD1, ENTPD8,	SELL, LOC100129322, TDO2, S1PR4, FAM65B, CD70, , IGF2BP3, LOC151009, LYG2, LOC283710, LOC728684, IL17C, PGA3, SLAMF6, ZNF80, SSX3, NPBWR1, LOC100288292, RP11-165H20.1, TNXB, KLHL5, FAM153A, TSPAN32, KYNU, ZBED2, OR2T1, BCAT1, CTSL1P2, LOC150622, AIM2, FAM55C, FCRL5, RAB39B, COL27A1, ZBTB32, TLR9, TTLL4, CTLA4, TNIP3, CCDC129, STMN1, TRIM27, PTPRC, CR1, ACOXL, OLFML2A, FAM159A, RRNAD1, HAPLN3, TTYH1, UBD, PHOSPHO1, CPNE5, KCNA2, ELOVL2, CXCL1, FBXO2, TRIM53P, POU2F2, EMB, ADA, GLCCI1, SP140, ORAI2, AAK1, LAX1, FLJ40039, WNT2, CFB, FYN,

	<p>GOLT1A, PYGB, TRIM36, HAVCR1, PTPRK, CAMK2N1, GRTP1, NUDT12, PRELID2, GJB1, LEKR1, KLB, LIMA1, FGFBP1, RAPGEFL1, C20orf54, SDCBP2, AKR1B15, LGALS1, MMP15, MAGIX, ETFB, PAPSS2, LCE3B, C20orf118, TMEM97, ABCB1, MACROD2, PAQR5, OTOP2, F12, SCGN, CGN, CELA3B, ABCD3, NPY1R, AGPAT2, SST, ZNF575, HIGD1A, LETM1, CCNI2, NR5A2, CCDC85C, SH3D19, HOOK1, MYZAP, SLC25A34, ABHD11, SPR, SPINT2, RIMKLA, PTP4A1, ATPBD4, TMEM98, GSTA2, P2RY1, UGDH, SLC16A5, ZG16, PTPRN2, AKAP1, CCDC113, SLC16A9, FSIP2, FUT5, SLC38A4, MAMDC2, SYTL2, PEX11A, FAM59A, C17orf76, KLK15, GIPC2, FAM189A1, HRCT1, C1orf226, MARVELD2, HMGA2, PLAC2, C1orf210, GUCA2A, HES5, EPB41L1, AVPI1, TYRP1, LOC100130916, TBX10, SLC25A24, PGAP3, C8orf55, GPA33, EXPH5, MUC2, TJP3, YIF1B, NGEF, MYO1D, KIAA0284, CA7, AP1M2, GLYCTK, SPRYD7, SPINT1, OPHN1, VIPR1, CYP2J2, SCGB2A1, MACROD1, TMEM56, MAGI3, ELMO3, DDAH1, COL4A6, FABP1, TTR, POF1B, MGC34796, EPS8L2, NUDT8, NR2F6, SDR42E1, SHROOM2, NOSTRIN, IL22RA1, TAX1BP3, C21orf71, CDH1, C8orf83, CMTM4, AIMP2, PRSS3, RAP1GAP, FASN, PLEKHA5,</p>	<p>PLXDC1, CLIP4, CHST11, HPX-2, ENTPD1, FRG2C, JAK3, CRTAC1, SOCS1, RNF170, CR1L, ODZ4, IDO1, SNX20, TBC1D3, SLC2A6, OR1S2, WIPF1, EPHB6, MORC1, SLA, TRIB2, BATF, TARP, PPP1R18, TNFRSF8, LRRK2, SERPINE1, TMEM154, RHBDF2, ALOXE3, C16orf54, ALPK2, C9orf96, ITGAX, SLC6A6, RAB7L1, FOLH1B, RASSF5, FAM113B, IL15RA, PLEKHG2, BHLHE22, ZNF714, FAM126A, PTGFR, TNFRSF9, ADORA2A, GMFG, TXNDC11, RHOH, TAGAP, SH2D1A, PIM2, KRT73, SMR3A, CD28, FMNL1, OR1S1, C1R, BASP1, CTSK, ST6GAL1, MGC16025, C20orf201, TSC22D3, PNOC, MAG, CXCR4, GSC, TXLNB, CHRDL2, CYTH4, RAC2, CDK14, INSL3, LILRB1, RIMBP3, ANKRD55, HIVEP3, MR1, FLJ32255, CRABP2, RGS16, LRRC16B, IKBIP, ARHGDIB, FAM92B, TMEM40, VAV1, CAMK1G, LOC338739, HAP1, IFI16, BNC1, TTC22, FCAR, GUCY1B3, ARHGAP25, GUCY1A3, IL6, TRIM46, CD5, KIAA0125, NOX4, FLJ41200, BVES, FSCN1, SERPING1, CORT, FCRLB, LOC284757, IL21, RASSF2, TGM2, KCNN3, ERC2, ACTR3BP5, EVI2A, LATS2, ADAMTS10, CXCL2, C5orf39, RASGRP2, TBC1D10C, DENND1C, NXPH4, TNF, FAM65C, NLRP1, FAM172BP, GPR132, FOXP3, EVI2B, CEP170, CMTM7, CD40, FBXO43, EGFEM1P, XBP1, BGN, LOC497256, CD53, PLEKHO1, FMNL3, AHSA2, KMO, CYTIP, PTP4A3, ICOS, CD79A, ANGPTL6, IL21R,</p>
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	<p> UGT8, KIF13B, CMBL, LRRC66, FAR2, ND2, TMEM164, KIAA1671, CES2, APOH, TMEM30B, TUBAL3, CACNB2, RBP2, PTPRF, UQCR10, KRT8, GP2, NEDD4L, CPA6, VIL1, TTC38, PRR15L, TUBB4B, KRT8P12, PIP5K1B, PRKACB, LOC80054, COL4A5, SAMD13, VSTM2A, EPS8L3, PARD3, PCK1, RAB19, AKR7A3, CHST5, AIM1L, OSTBETA, COBL, PCDH20, MBOAT2, GSTA5, C2orf82, TMEM52, MESP2, B4GALNT3, PNPLA4, CFL1, DMRTA1, GOT1, MMEL1, GPR39, FAM86FP, ITPKA, CAPN2, CYP2C18, ABP1, IL20RA, CYP1A2, PPAPDC2, DGAT1, PSMG4, EPB49, CLYBL, DTX4, TMTC4, FRRS1, CDC42BPG, DNAH6, ND4, HMGCS2, MYO7B, F11R, HEPACAM2, CLDN7, C6orf136, SHROOM3, MPV17L, LOC643714, DAGLA, DNAJC11, TMEM53, ZNF704, C3orf70, COMTD1, LOC440335, SSTR1, S100A14, RDH13, VSIG2, PCDH1, CEBPG, KLK3, DCXR, NHSL1, MRPL12, TOB1, HNF4A, FAM108C1, PERP, TPMT, ATP1A4, C14orf128, C9orf7, TONSL, MPL, DHRS11, KIAA0664, MPST, LOC389023, ZNF703, C1orf201, PPARG, C10orf47, SRI, IGF2BP2, CA1, KRT83, GBA3, PANK3, IMPA2, HAS3, ARHGEF35, CHCHD10, TXNDC17, TM4SF5, DOK4, GSTO2, PCSK5, TRPM4, FAM150B, AGMAT, TTC12, SLITRK6, GOLIM4, EGFR, TST, </p>	<p> COL11A2, PSTPIP1, PFKFB3, RSPO1, P2RY8, PDE4DIP, MMP19, PDCD1, FUT7, NYX, IFNAR2, SLC1A3, LOC730227, CDYL2, FGR, SMAP2, TRAF1, SRGAP2, CCDC69, C11orf20, GYPC, DOCK8, TRAF3IP3, ESR1, SIT1, CADM1, MRAS, LY6E, CCR7, C14orf165, C6orf126, CHST6, ELOVL5, NTNG2, IKZF3, TNFAIP2, SLC16A11, FLI1, SLC25A45, POPDC2, LAT, OR3A2, NPY2R, LBH, BTN2A2, CSTA, KIF3C, RHEBL1, IL1A, FXYD5, TLR6, PPAPDC3, LOC100129196, IGF2, DRAM1, TNFAIP8, SLAMF1, DDIT4L, PIK3AP1, ZNF876P, CHN1, HOXC4, APBB1IP, FAP, SNURF, C1S, GVINP1, MZB1, DOK3, MEF2B, FAM89B, GPSM3, DYRK3, LOC100129648, PRDM15, R3HDML, ACAP1, FAM49A, VNN2, C9orf173, ARID5A, ZNF512B, FBXO10, TXNDC5, MAK, RASAL3, FMO6P, PARVG, SNX10, LRRC8C, BAG2, IL16, TRIM67, BCL6, LOC400958, CD180, SAMD14, ST3GAL2, PTPN7, CCDC136, BCORP1, APOBEC3G, CIITA, MTMR9LP, THY1, SH2B2, RUNX3, PPM1K, CXorf21, PIK3CD, DOCK11, ANKRD36B, KLHL6, QKI, FCHSD2, NFATC1, MEGF6, C4orf44, PRDM1, ARID3A, WAS, TRPS1, NEFH, HRH4, LOC440297, GPR65, SPTBN4, CD38, IFFO1, MYO1G, SAMSN1, LCP1, LOXL1, LOC648987, ARRDC5, BTG2, DNAJC5G, WNK4, GLT1D1, PHACTR1, ZC3H12A, BCL2A1, CNGB1, ISLR, C8orf66, CD52, PLCG2, CRYBA4, RBMY1B, </p>
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	<p> ACTN4, TMEM177, GPRIN2, CDKL1, PTPRH, PP14571, ZNF774, PDE3A, KIAA1244, MIER3, DAOA, BTNL3, DLG3, HSD17B2, TMEM35, BDH1, FOXA3, STARD10, LOC100129516, ARHGEF10L, FH, L2HGDH, ARL4A, WFIKKN1, SLC9A1, ACR, PRSS2, ESRP1, TMEM144, BZW2, CLCN2, PLCE1, LSR, PPFIA3, LOC729680, ZBTB7C, FSIP1, DCTPP1, SLC39A5, CA2, RPS26, RBM47, CNM4, NRG4, LOC645586, PXMP2, LOC100133311, PDHA1, TUBB8, C1orf21, DCDC2, CDH17, FZD5, GATA6, SLC44A1, C2orf72, C17orf110, TOM1L2, PRR15, FEV, CANT1, SERINC5, TAS2R39, CORO2A, ATP1A1, NRARP, CHP2, TMC4, SORBS2, ACTL8, UNC5C, ABCC3, C10orf116, PPP1R1C, EDN3, RSG1, TPRN, HNF4G, SYTL4, LGR4, DDC, MYL12B, MYO5B, CAST, TTLL12, LGALS4, GPD1L, FAM83F, SPDEF, PTPN3, GIPC1, BEND3, ZNF462, RDH5, OR52A1, SPHK2, FER1L6, PCYT2, GSS, SPPL2B, PRODH, SLC35D1, HHIP, FAM162A, CAPN1, ABHD12B, ENTPD5, ANKRD20A9P, SIAE, SULT1A4, ATP5G1, KCNG3, PRLR, ZNF497, A1CF, CLDN23, C1orf53, MGST2, ZNF326, ACOT7, TMEM141, PPP1R13B, HDAC11, PKP3, PHB, MAOA, EPS8, CBLN4, ODF3L2, CAMSAP3, C5orf32, MAPK3, MAPK13, CDS1, CPT1A, KCTD9, DBNDD2, AKR7A2P1, LOC100507410, </p>	<p> ARHGAP30, SLC26A11, FCGR3A, LOC100505585, FGF1, PYHIN1, ACTR3BP2, SEC14L1, TRO, SGTB, CYP26B1, TNFRSF4, P2RX7, CUBN, TUBB4A, TRIM22, LRRC34, MEX3D, FGD3, BATF3, MAPK11, TBC1D2B, LTBP2, REXO1, HIST1H1A, STRA6, CXCR2, FKBP11, FAM90A10, CARD6, TCF4, ZAP70, IGDCC4, C1QTNF3, ITPRIP, LOC100130811, SLC1A2, HOXB4, ZBP1, DCN, PIK3CG, EVC2, TREML2, CALHM2, HDAC7, RASGRP1, CEP128, RSPO3, CD3E, RILPL2, GBP5, PDE9A, PLA2G4C, GPR183, DERL3, EID3, ADAM23, NFKB2, APOL3, C11orf21, CACNA1E, DNAJB13, KLHDC7B, TNFSF13B, SERPINB9, LOC401463, CMTM3, IQSEC1, CSGALNACT2, TCL1B, LOC100653245, CCDC80, CERS4, SEMA7A, LOC652119, FAM125A, RELT, MYOG, CCL18, SPAG4, DAPP1, PLEKHO2, SLC12A5, CYSLTR1, ATP2B4, SYT11, PILRA, FBXO44, C1orf216, RUNX1, LIX1L, CASQ1, TMEM71, ARHGAP9, PPM1M, CCDC152, FYB, LOC285286, LOC100289580, IGFN1, SPRNP1, LUM, KCNAB2, ATXN2L, THAP2, LAPTM5, LINGO3, TNFRSF18, LMNB1, OAS2, LOC100133286, ALOX5, C12orf35, KRTAP4-12, LCK, LYPD1, EP400NL, FAM167B, BTK, FAM21C, SP110, IKZF1, RARA, KIRREL3, SPOCK2, TTBK1, LAT2, RINL, LOC100132790, MAP4K4, EHD3, A1BG, GHSR, RECK, FAM13C, SP140L, IL23A, </p>
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	<p> MKRN7P, MRRF, ANKRD9, MLLT3, MIPEP, PFKFB2, NDOR1, GPHN, ALDH7A1, GRB14, SLC25A10, PTK6, SUCLG2, SCIN, FBXL22, ATP5D, B3GALT1, GALNT7, FKBP4, PADI2, C2orf89, ARHGEF26, PIWIL2, AGFG2, COX2, TRIM50, FAM55B, NRAP, ABHD11-AS1, PLEKHG3, DLD, PCCA, C9orf167, PVRL3, PPIA, PLXNA2, ZNF607, NR1H4, MICALCL, CYC1, MGST3, CTSL2, MANSC1, FABP2, NEUROD1, PHGR1, SLC20A2, OSGIN1, KCNK5, CYP2C9, GSN, PODXL2, TTPA, RAB40C, NMNAT1, ARHGEF5, CDHR5, MTUS1, ZNF681, SLC9A2, NDUFA10, KLHL32, LONRF3, UGT2B10, FLJ31104, ATP5B, ACSS2, SSH3, REEP6, PKDREJ, CYP51A1, C3orf25, SYDE2, PCDH19, FSTL4, B3GALT5, STK39, CA13, FCGBP, PITPNM3, GSR, AHCYL2, AP3S2, NBEAL1, BCAR1, RASEF, UNC13B, DOLPP1, CTNND1, SCN4B, DKFZP564C152, PDSS1, SH3RF1, C8orf38, COX6C, ND4L, PRRG2, GPD3, SEMA6A, TLE2, GPR37L1, AQP11, COL17A1, TNNC2, TPM1, NR1I2, ALDH3A2, PLS1, KIAA1324, DHRS4, SLC3A1, KLF4, CLRN3, FARP2, CALML4, COX1, ELF3, SLC22A23, SLC39A4, UGT1A6, CHPT1, CTTN, SLC17A4, ZNF57, THNSL1, ZP3, GAS2L3, TOMM40, DSC2, BOLA3, DOPEY2, NIPAL1, SLC2A13, UGT2B11, FOXD2, C10orf108, PHYH, RIMS4, PLA2G4F, FAM83G, </p>	<p> H1FX-AS1, SNORA71C, RAB8B, C17orf72, MYF6, LOC100506676, ODF3B, IL10RA, PLAGL2, SLFN11, PTPRCAP, LAMP3, PGF, IL28RA, TPTE2P6, DUSP10, DTNB, TAS1R3, VIM, ACSL1, JAZF1, IGFLR1, OSM, TRPV2, IPCEF1, TFEC, C6orf145, DEF6, PRKCH, SAMD9L, SRGN, CHST15, PARP8, HLA-DOB, YPEL3, ARL11, EGFL6, PPP1R16B, HS3ST3B1, H2BFXP, CCR8, MX2, AGAP2, LOC729175, CD72, ACCN4, MIAT, EAF2, TMC8, EBI3, HR, CRYGA, PTK7, MICB, DAB1, IFI6, SELP, HECW2, LIMD2, BPIFB2, MURC, CARD8, RABGAP1, ADPRH, ELFN2, APH1B, PION, CD6, KCNJ8, TPST2, HHIPL1, MGC23284, PTAFR, HHEX, OR4X2, C9orf174, PACS1, SH2D3C, ERCC2, ZNF671, STMN3, PRDM8, PECAM1, RAVR1, ANXA6, NKX2-3, HAVCR2, ATM, DFNBS9, ATMIN, PRRX1, SH3BP5, CSF3, CEP19, BMP1, NOG, C13orf15, ELMO1, LOC100129973, SLC2A14, TRIM78P, PML, TM6SF1, C1orf228, LOC645431, CENPP, CFI, TMEM156, SLC39A6, ELK3, MFNG, GNAI2, GPR133, FAM78A, SUCNR1, VSIG7, PLCB2, DFNA5, PRB3, NGF, GPR119, PARP15, FLJ42875, RAPH1, PARVB, SOX5, LPXN, CXCL3, TIAM2, GALNT14, SRRM3, IQSEC3, ADAM19, FPR2, TIGIT, LOC646513, PREX1, SLC34A1, BLVRA, SASH3, CCL4, ANKRD13D, CD3D, EID2B, LOC400743, FMR1-AS1, CYP7B1, OR51G2, TMCC2, PLA2G4E, PKP1, ARID5B, NAALADL2, CD300C, </p>
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	<p> LOC100134229, NAPRT1, ATP6, MEST, MS4A8B, KRT20, AKAP5, MRPS35, ROCK2, LDLR, ACVR2A, OTC, HES1, ANKRD43, CYP4F12, C19orf73, PKIB, CKMT1A, PLEKHA7, CAPN5, ATOH1, RTKN, CAPN8, C5orf63, REPS2, DHRS7C, APLP2, SPRYD4, FRK, DHCR7, PGM1, RALGDS, RIPK4, RPS6KA6, KLF3, IGSF9, ABCA8, KBTBD12, COPG2IT1, SCO1, TUFT1, LRRC19, PRDX6, FAM195A, CDKN2B, EFR3B, SYT13, ZNF219, LPIN3, LUZP2, CEBPA, GPC4, INF2, PPARGC1B, PTPN21, CRYL1, FAM83B, CENPV, GPR98, COX3, LINC00483, DST, HES2, TMIGD1, LPP, CHMP2B, MYH7B, FAM171A1, SLC2A8, SLC39A11, IL17RE, ND3, LOC284578, SPTLC3, LOC285758, DTWD2, STAP2, TJP2, ECHS1, SLC25A13, DDR1, ACO2, SLC22A5, FAM101A, MVP, ALDH1L1, OR7C2, TMEM45B, MBOAT1, LOC400768, PLEKHJ1, DHRS9, PPP2R3A, C10orf58, FAM160A1, ZSWIM5, COQ3, PYY2, GGCT, WASL, ETHE1, CLMN, CASZ1, SATB2, SLC7A4, CD9, C9orf125, ATP13A4, CEACAM1, CHRM1, PPP1R36, ANKRD57, C1orf172, SH3BGRL2, CRB3, SPTBN1, FAM84B, DAB2IP, ATP7B, CORO1B, SOX6, TMEM171, APOBEC1, AQP8, ESRP2, RNPEP, SIPA1L3, ASAP2, LAMA4, CYP1A1, HDGF, HMGCS1, FAM86B1, </p>	<p> KIF25, RNF166, RRP7B, CD300A, C10orf10, PDE4B, HCST, ITGAL, IL2RA, LY96, IDO2, ITPRIPL1, SARDH, NAPSA, CHI3L1, APOL4, BNIP2, OR13A1, RAB31, NNMT, ASAP1, S100A4, ADAM12, Sep-01, SLC24A4, NFKBID, CSGALNACT1, DCX, WDFY4, WSCD2, GBP4, AGRP, COLQ, RNF144B, HLA-DRA, FAIM3, C8orf80, MXRA5, RORA, MYO5A, FGD2, SNN, BST2, CD84, TNFRSF6B, SELPLG, ITK, CXCR1, LOC399715, IRF5, CARD17, SLFN12, CHST2, LOC154761, Sep-06, MARCO, CSF2RB, PCOLCE, PQLC3, LOC150185, CPT1C, CMTM2, LYN, NKX6-3, CCDC88A, LOC284751, COCH, SBNO2, RNF213, ADARB2-AS1, HSH2D, DOCK2, PROK2, ITGA4, UNQ6494, POU2AF1, TBX21, SIX1, TNFRSF13C, ADAM8, S1PR3, Mar-01, RAB3IL1, TGFB3, ST8SIA4, POMC, CPXM1, ANK1, FAM20A, GZMK, SH3TC1, CD37, LSP1, LTB, LAG3, KCTD7, CD274, ST3GAL1, ZYG11A, SLC38A10, PLXNC1, STAT5A, KISS1R, RHOJ, CASP10, NHLRC4, LOC100129292, ZNF382, LILRA3, APOL2, SERPINI1, LEF1, ADD2, LDLRAD2, ZEB1, LOC100129113, EPHB1, SCARA3, CORO1A, CD2, S1PR5, ACSS3, DIO2, LOC729305, TGIF2LY, LOC284561, ARHGAP15, HAS1, CSRP2, PATL2, DLG4, KLHL17, MSL3, C17orf96, RAMP3, TSPAN11, TRAT1, CELF4, FBXO41, CD3G, AKAP2, FNDC9, SYNE1, ITGAM, IL4I1, P2RX5, SIX4, </p>
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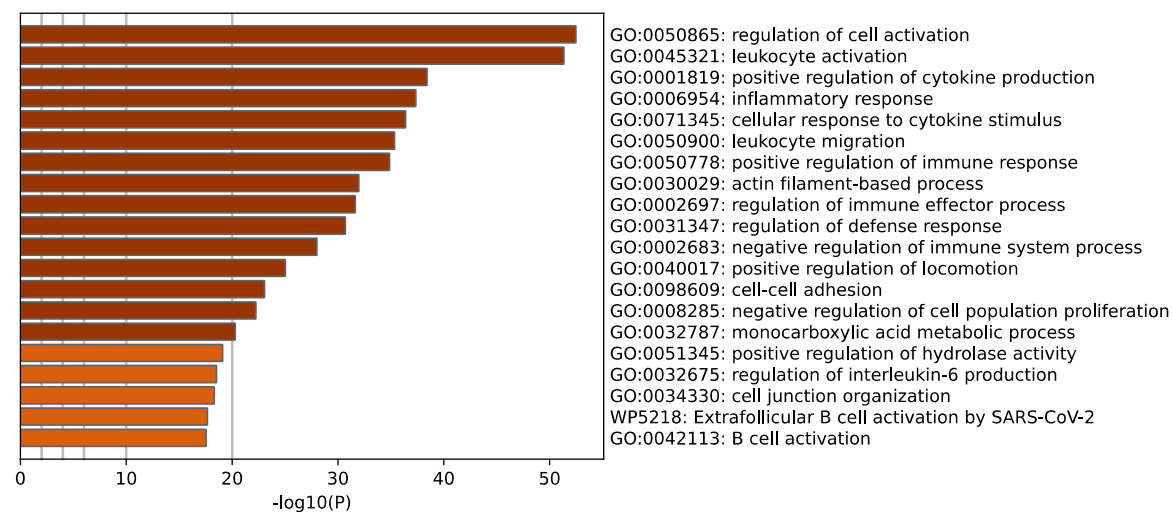
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Figure S6 Gene term enrichment analysis of the 2789 DEGs of dataset GSE111761 (RE vs NRE)

(A) Pathway analysis:



(B) Transcription factors:

