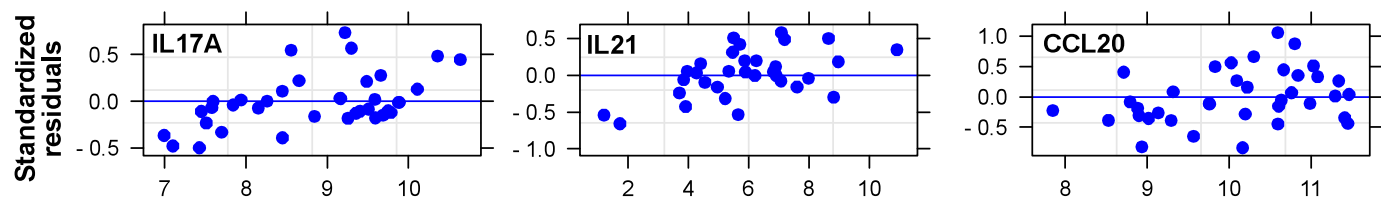
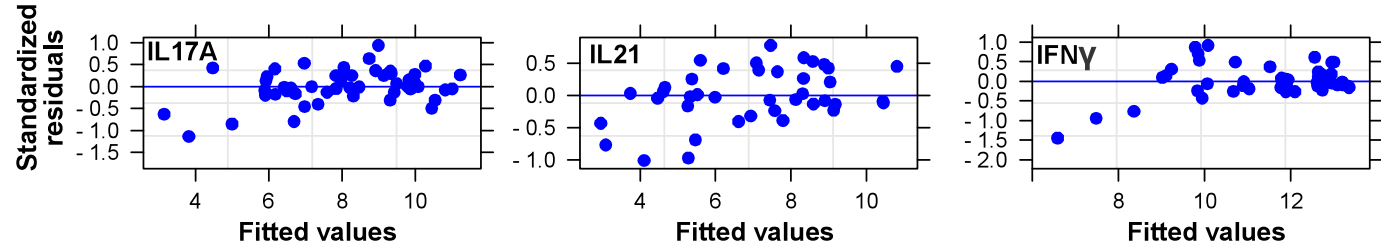


Supplementary Figure 1

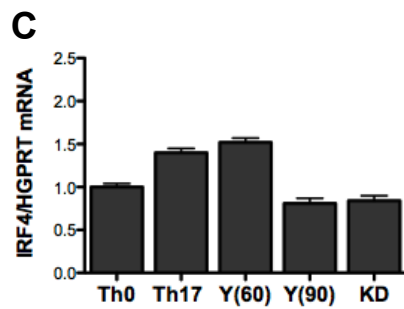
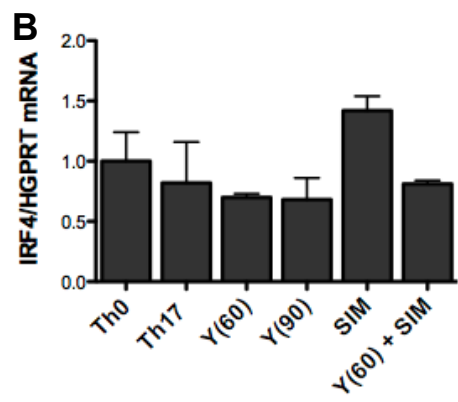
Umbilical blood



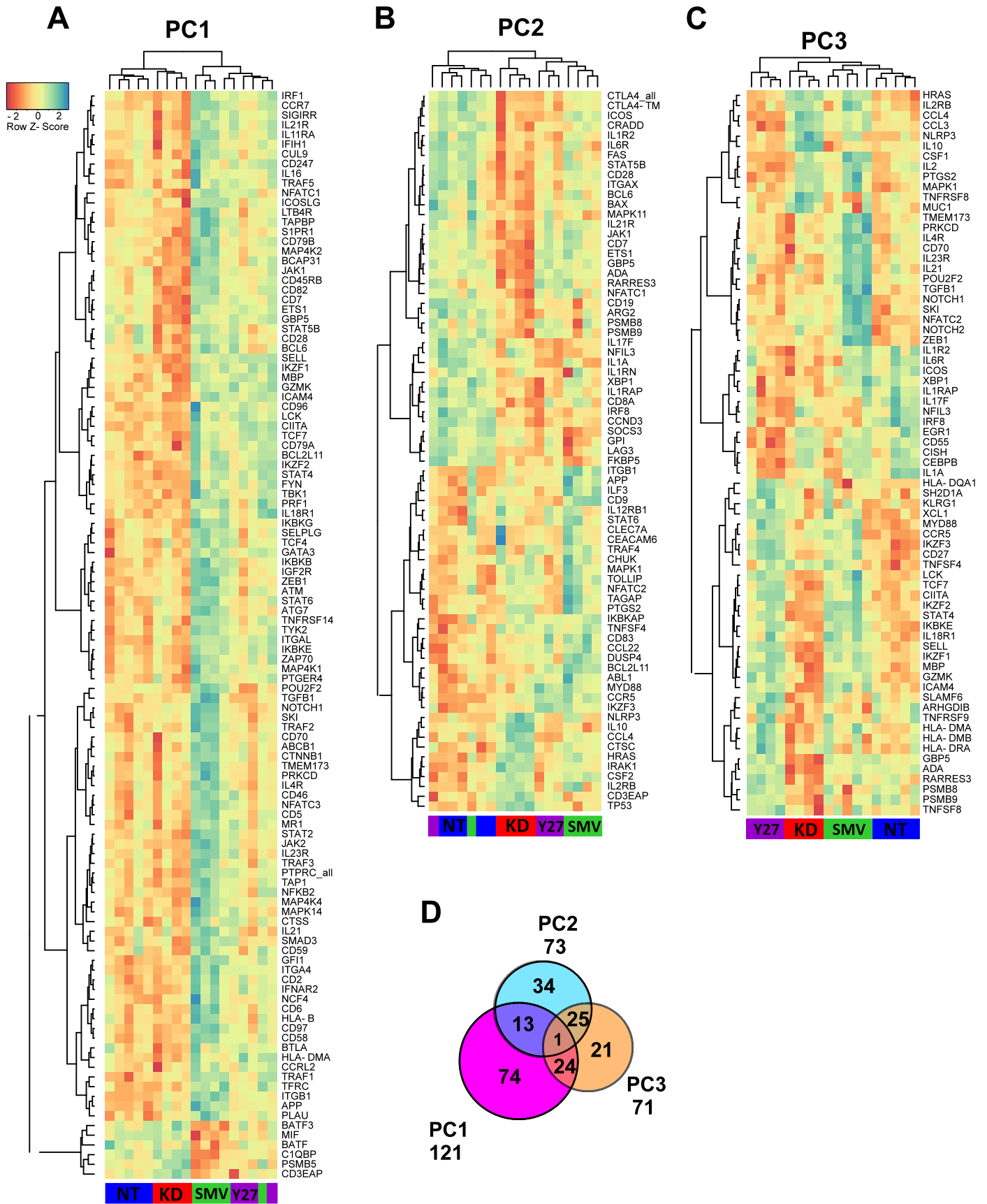
SLE



Supplementary Figure 2



Supplementary Figure 3



## Supplementary Figure 4

	term	n. of term genes	corrected p-value	Y27632 KD026	
<b>Gene Ontology</b>					
leukocyte differentiation	GO:0002521	258	4.80e-11	15	CD79A,ZAP70,ITGA4,IRF1,CD27,ITGB1,IKZF3,SLAMF6,PTGER4,LCK,IKZF1
transmembrane receptor protein tyrosine kinase signaling	GO:0007169	845	1.5e-07	19	JAK2,ABL1,MAPK1,IL2RB,PSMB5,CD3EAP,CD8A,JAK1,CSF2,STAT5B,CD7,HRAS,CD19,CD28,IRAK1,MAPK11,PSMB8,PSMB9
JAK-STAT cascade	GO:0007259	124	1.79e-04	8	JAK2,MAPK1,IL10,NOTCH1,IL6R,CSF2,STAT5B
leukocyte proliferation	GO:0070661	161	1.74e-09	12	CD79A,ZAP70,IRF1,XCL1,IKZF3,HLA-DPA1,HLA-DMB
positive regulation of proteolysis	GO:0045862	316	4.81e-03	9	FAS,TNFRSF1B,BAX,JAK2,PSMB5,CTSC,NLRP3,PSMB8,PSMB9
response to tumor necrosis factor	GO:0034612	242	3.81e-05	10	TNFRSF1B,TNFRSF9,JAK2,PSMB5,TNFSF4,TNFRSF8,PSMB8,PSMB9,CCL4,CCL3
positive regulation of innate immune response	GO:0045089	315	3.10e-06	12	MAPK1,PSMB5,NFATC2,C1QBP,IRF3,NFATC1,GBP5,HRAS,IRAK1,MAPK11,PSMB8,PSMB9
response to lipids	GO:0033993	351	7.49e-07	13	FAS,TNFRSF1B,TNFRSF9,JAK2,TNFSF4,TNFRSF8,IL10,IL1RN,NLRP3,STAT5B,IRAK1,SIGIRR,CCL3
response to fibroblast growth factor	GO:0071774	315	4.08e-05	11	JAK2,MAPK1,IL2RB,PSMB5,JAK1,CSF2,HRAS,CD19,CD28,PSMB8,PSMB9
Fc-epsilon receptor signaling pathway	GO:0038095	326	1.89e-07	13	JAK2,MAPK1,IL2RB,PSMB5,NFATC2,NFATC1,JAK1,CSF2,HRAS,CD19,CD28,PSMB8,PSMB9
activation of MAPKK activity	GO:0000186	222	2.45e-04	9	PSMB5,TP53,CRADD,MUC1,PSMB8,PSMB9
positive regulation of cytokine production	GO:0001819	299	8.21e-09	13 14	IRF1,XCL1,SLAMF6,STAT6,PTGER4,MYD88,TLR1,TBK1,HLA-DPA1,JAK2,C1QBP,TNFSF4,TNFRSF8,IRF3,IL10,GBP5,IL6R,NLRP3,CSF2,CD28,IRAK1,MAPK11,CCL3
response to lipopolysaccharide	GO:0032496	145	1.12e-08	11	FAS,TNFRSF1B,TNFRSF9,JAK2,TNFSF4,TNFRSF8,IL10,NLRP3,IRAK1,SIGIRR,CCL3
regulation of apoptotic process	GO:0042981	1049	1.27e-09	23	FAS,TNFRSF1B,TNFRSF9,BAX,JAK2,ABL1,IL2RB,PSMB5,C1QBP,BCL6,TNFRSF8,ETS1,IL10,TP53,NOTCH1,NLRP3,CSF2,MAP4K2,IRAK1,MUC1,PSMB8,PSMB9,CCL3
leukocyte cell-cell adhesion	GO:0007159	322	2.62e-12	17	TNFSF4,IL10,CD8A,NLRP3,ICOS,CD7,CD28,ADA
<b>Biological pathways (KEGG)</b>					
Influenza A	KEGG:05164	174	1.68e-07	7 12	
Inflammatory bowel disease (IBD)	KEGG:05321	63	1.08e-09	10	STAT4,STAT6,HLA-DMA,HLA-DRA,HLA-DPA1,HLA-DMB
Jak-STAT signaling pathway	KEGG:04630	159	1.68e-07	10	JAK2,IL2RB,IL21R,IL10,IL6R,JAK1,CSF2,STAT5B,HRAS
Herpes simplex infection	KEGG:05168	182	2.82e-07	12	
T cell receptor signaling pathway	KEGG:04660	106	3.09e-07	10	MAPK1,NFATC2,NFATC1,IL10,CD8A,ICOS,CSF2,HRAS,CD28,MAPK11
Rheumatoid arthritis	KEGG:05323	86	1.13e-05	8	
AGE-RAGE signaling pathway in diabetic complications	KEGG:04933	102	7.35e-05	4	BAX,JAK2,MAPK1,NFATC1,STAT5B,HRAS,MAPK11
<b>Biological pathways (Reactome)</b>					
Interferon Signaling	REAC:913531	193	1.77e-03	8	TYK2,IRF1,IFNAR1,IFNAR2,CIITA,HLA-DRA,HLA-DPA1
Translocation of ZAP-70 to Immunological synapse	REAC:202430	19	9.62e-06	5	ZAP70,LCK,CD247,HLA-DRA,HLA-DPA1
Immunoregulatory interactions between a Lymphoid and a non-Lymphoid cell	REAC:198933	149	9.43e-07	10	ITGAL,ICAM4,ITGA4,KLRG1,ITGB1,CD96,SLAMF6,SH2D1A,SELL,CD247
Signalling to ERKs	REAC:187687	247	3.05e-04	10	JAK2,MAPK1,IL2RB,PSMB5,JAK1,CSF2,HRAS,MAPK11,PSMB8,PSMB9
Signaling by Leptin	REAC:2586552	237	1.88e-05	11	_____ // _____ // _____
Signaling by PDGF	REAC:186797	349	1.30e-05	12	JAK2,MAPK1,IL2RB,PSMB5,JAK1,CSF2,STAT5B,HRAS,CD19,CD28,PSMB8,PSMB9
Signaling by ERBB4	REAC:1236394	315	3.85e-06	13	_____ // _____ // _____
Signaling by EGFR	REAC:177929	340	7.57e-04	11	_____ // _____ // _____
Signaling by SCF-KIT	REAC:1433557	311	3.30e-06	12	_____ // _____ // _____
Signaling by Interleukins	REAC:449147	313	3.69e-9	16	TOLLIP,JAK2,MAPK1,IL2RB,PSMB5,IL1R2,IL1RN,IL6R,JAK1,CSF2,STAT5B,HRAS,IRAK1,PSMB8,PSMB9
Interleukin-2 signaling	REAC:451927	248	3.00e-5	11	JAK2,MAPK1,IL2RB,PSMB5,JAK1,CSF2,HRAS,MAPK11,PSMB8,PSMB9