

cell type	markers
B cells (general)	MS4A1, CD79A, CD79B, VPREB3, CD19
B cells naive	IGHM, IGHD, CCR7, SELL
B cells activated	CD69, CD83, JUN, IRF4, MYC
B cells memory	CD27, XBP1, CLEC2D, SSPN
B cells unswitched memory	IGHM, IGHD, CD27, FCRL5
B cells proliferative	TCL1A, CD79B, CD79A, MS4A1, MKI67
Plasma B cells	JCHAIN, IGHG1, IGK, IGHC, IGHM, IGHG3, IGKV1D-39, IGHG2, IGLC3, IGHG1, IGHG4, IGHV4-4, XBP1, CD79A, CD38, MZB1, SSR4, DERL3, FKBP11, PRDX4
Plasma blast	IGHG1, IGHG4, JCHAIN, IGLC3, IGHG1, MZB1, IGK, IGHM, XBP1
CD4 memory stem cells	IL7R, CCR7, TCF7, KLRB1, GPR183, SELL, LEF1, CXCR4, RORA, FOXP1, CCL5, CD3E, CXCR6
CD4 effector memory RA	TXNIP, KLRD1, KLF2, PRF1, TRBC2, TRBC1, TGFBI, SPON2, CCL4, IL7R, TCF7, SPN, ITGAL, IL6ST, ZNF683
CD4 activated	DUSP2, CD69, JUN, JUNB
CD4 transitional memory	CXCL13, TNFRSF4, TIGIT, IL6ST, PASK, KLRB1, CD40LG, TOX, LEF1, ICOS, CD28, TOX2, CCR7, CD247, RORA, PDCD1
CD4 resident effector memory	KLRB1, IL7R, LTB, S100A4, RORA, CD40LG, CXCR6, CD69, IL32
CD8 activated	IFI6, IFIT3, IFI44L, LY6E, IFI44, STAT1, IFI35, IRF7, IFITM1, IFI16, CD38, IFNG, GZMA, GZMK, CXCL13, CD69, RUNX3, IL32, IL2RG
CD8 cytotoxic	GZMK, DUSP2, CCL5, ANXA1, NKG7, FYN, XCL2, GZMM, EOMES, CCL4, GZMA, CXCR3, KLRG1, XCL1
CD8 exhausted	CXCL13, LAG3, HAVCR2, TIGIT, PDCD1, PRF1, TOX
CD8 IFN activated	IFITM1, IFITM3, NFKBIA, CD69, IFITM2, FOS, IL32
T cells regulatory	TNFRSF4, FOXP3, TNFRSF18, BATF,

	IL2RA, IL32, TIGIT, LTB, CTLA4, ICOS
T cells proliferative	HMGB2, MKI67, HMG2, TOP2A, CXCL13
Th17/helper	IL17A, IL17F, BATF, IL2RA, DUSP4, IL21R, CTLA4, IRF4, CCL20, IL26, BATF3, IL4R, STAT3, RORA
NK	GNLY, PRF1, NKG7, KLRD1, SPON2, CTSW, FCGR3A, GZMB, CX3CR1, CMC1, FOSL2, KLRC3, KLRC4
Macrophages SPP1	SPP1, APOE, C1QB, C1QA, APOC1, C1QC, HLA.DRA, CTSB, CD68, SELENOP, HLA.DRB1, HLA.DPB1, CD14, FCER1G, CD74, FCGR3A, CD163, MSR1, A2M
TAMs C1QC	C1QB, C1QA, C1QC, APOE, SELENOP, CD14, SPP1, CD68, CD163, CXCL2, CSF1R, FCGR3A, IL1B, PLTP, MRC1, SIRPA, CD40
Macrophages CXCL10	CXCL10, IL1RN, CCL2, CCL8, CXCL11, LYZ, FCN1, S100A9, S100A8, CD68, CD14, SERPINA1, LILRB2, LGALS9, FCGR2A, IL1B, LILRB4, CD274
Macro. and mono. prolif.	SPP1, C1QC, C1QB, C1QA, PLTP, SELENOP, LYVE1
Monocytes tumor infiltrating	S100A9, S100A8, CXCL8, IL1B, CCL3L3, LYZ, G0S2, SOD2, CXCL2, CXCL3, CD14, CSF3R
DC1	HLA-DPA1, IDO1, C1orf54, CLEC9A, SERPINB1, XCR1
DC2 CD1C+	HLA-DRA, CST3, HLA-DPB1, HLA-DPA1, HLA-DQB1, FCER1A, CD1C
DC3 LAMP3	FSCN1, LAMP3, CCR7, IDO1, HLA-DQA1, CD274
DC4 CD1C-	LST1, AIF1, SERPINA1, FCGR3A, LILRB2, CSF1R
pDC	IRF7, IRF8, TCF4, GZMB, IL3RA
Mast cells	TPSB2, TPSAB1, KIT

Supplementary Table 3 | Most relevant markers for the annotated cell types (level 2, 31 clusters)