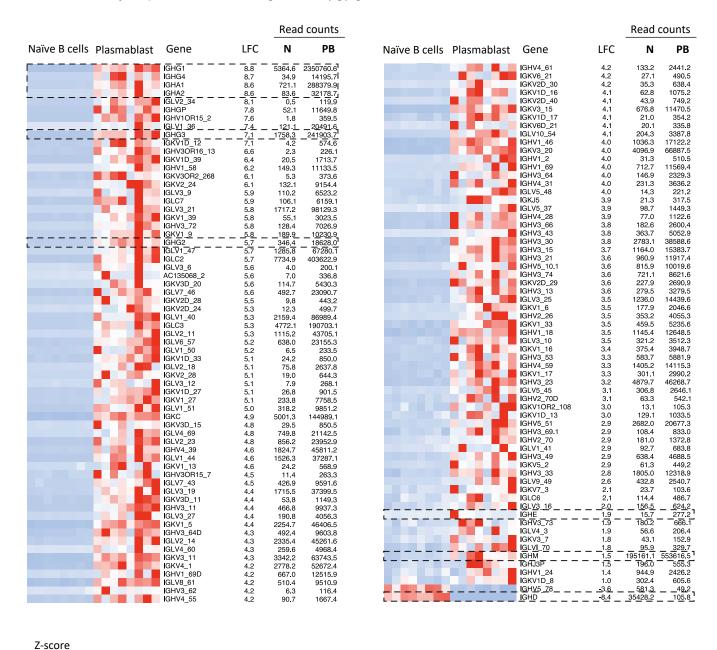
Differentially expressed Immunoglobulin (Ig) genes

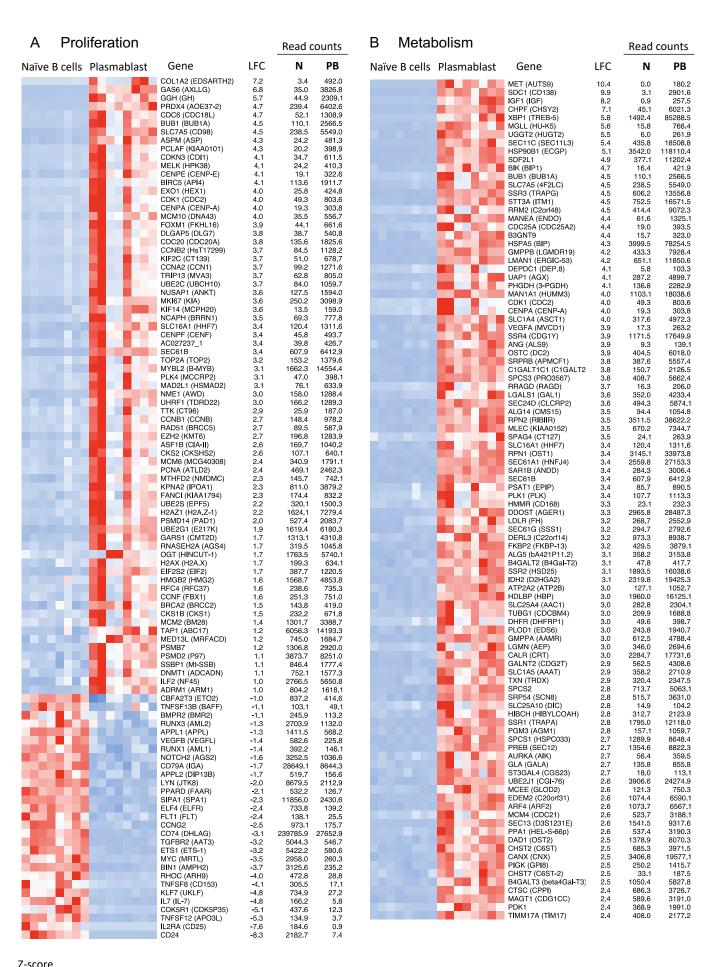
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SUPPLEMENTARY FIG 1 Heat maps of the differentially expressed Immunoglobulin genes.

130 immunoglobulin genes including variable and constant regions of heavy and light chains and pseudogenes are shown in the heatmap. IgG, IgA, IgM, IgE and IgD are shown in dotted boxes. Gradient of high to low gene expression based on z-score normalized counts is indicated from red to blue color. Genes that were significantly differential were only considered and clustered subjects using ward.D2 method. Right side of heatmap are gene name with common name in parenthesis, log2 fold change (LFC), average normalized counts of naïve B cells (N) and average normalized counts of plasmablast (PB).



		Read	counts				Read c	ounts
Naïve B cells Plasmablast Gene	LFC	N	РВ	Naïve B cells Plasmablast	Gene	LFC	N	РВ
PAM (PAL) ST6GALNAC4 (IV)	2.4 2.4	101.7 691.7	539.7 3660.4		PSMD12 (Rpn5) EIF2S2 (EIF2)	1.7 1.7	377.7 387.7	1209.5 1220.5
UQCRQ (MC3DN4) 2.4	598.0	3150.4		CCT8 (C21orf112)	1.6	1591.5	4987.1
GFPT1 (CMS12) DPAGT1 (ALG7)	2.4 2.4	351.0 701.5	1833.5 3650.1		EBP (CDPX2) NDUFC1 (KFYI)	1.6 1.6	776.8 370.2	2434.2 1150.5
GAPDH (G3PD)	2.4	7440.1	38681.0		RAB1A (RAB1)	1.6	1022.2	3139.1
GLRX (GRX) CHST12 (C4S-2)	2.4 2.4	592.8 536.0	3058.6 2761.1		FDXR (ADR) PCBD1 (DCOH)	1.6 1.6	78.3 46.0	238.4 139.8
TIMM8B (DDP2)	2.4	219.1	1127.8		ST8SIA4 (PST)	1.6	485.5	1467.5
TRAM1 (PNAS8) MTHFD2 (NMDMC	2.3	2111.5 145.7	10760.7 742.1		FH (FMRD) MTX1 (MTX)	1.6 1.6	544.6 161.3	1638.7 483.2
ACADVL (ACAD6) GGCX (VKCFD1)	2.3 2.3	3842.5 121.8	19067.0 600.4		DOLK (CDG1M)	1.6	212.3 251.3	636.1 751.0
RPL26L1 (RPL26P	1) 2.3	83.1	409.0		CCNF (FBX1) NDUFA8 (CI-19KD)	1.6 1.6	311.1	918.0
GANAB (G2AN) ALG2 (CDG1I)	2.3 2.3	3071.2 394.3	15016.4 1924.2		PSMC2 (MSS1) NDUFB1 (CI-MNLL)	1.6 1.5	1105.7 174.2	3255.1 504.5
ALG1 (CDG1K)	2.3	316.5	1532.2		BLVRA (BLVR)	1.5	133.4	387.1
UQCRH (QCR6) NDUFB6 (B17)	2.3 2.3	643.7 239.4	3114.0 1153.2		CYC1 (MC3DN6) HSPE1 (CPN10)	1.5 1.5	2051.6 165.0	5909.4 473.0
STT3B (CDG1X)	2.3	2271.1	10942.5		SYVN1 (DER3)	1.5	775.8	2222.1
UGGT1 (HUGT1) ARSA (ASA)	2.3 2.3	526.6 320.3	2527.3 1537.5		DECR1 (DECR) AKR1A1 (ALDR1)	1.5 1.5	734.6 1504.7	2101.9 4295.8
COPB2 (MCPH19) LDHA (GSD11)	2.3 2.3	1601.9 4837.8	7632.2 23046.7		CHPF2 (CSGLCA-T) UCHL5 (CGI-70)	1.5 1.5	1337.4 477.7	3802.7 1355.9
HMBS (PBG-D)	2.2	330.9	1568.6		HAX1 (HCLSBP1)	1.5	1326.9	3750.7
BPNT2 (GPAPP) FBXW7 (AGO)	2.2 2.2	375.0 827.9	1773.8 3863.4		UQCRC1 (D3S3191) CASP6 (MCH2)	1.5 1.5	2837.8 104.6	7974.8 292.6
QDPR (DHPR)	2.2	160.5	745.0		ALDH3A2 (ALDH10)	1.5	319.9	896.5
NDUFB3 (B12) UQCRHL	2.2 2.2	367.9 53.4	1697.9 244.0		NDUFB10 (PDSW) COX6C	1.5 1.5	981.4 1175.2	2730.5 3267.5
CLN6 (CLN4A) MAN2A1 (AMan)	2.2	59.2	265.8		MAN1A2 (MAN1B)	1.5	783.2	2176.0
CITED2 (ASD8)	2.1 2.1	500.6 122.4	2208.9 538.7		PIGF GNPNAT1 (GNA1)	1.5 1.5	150.9 85.7	417.0 235.0
PDIA3 (ER60) USO1 (P115)	2.1 2.1	4075.5 805.9	17909.3 3518.6		B4GALT4 (B4Gal-T4) SLC9A3R1 (EBP50)	1.5 1.5	208.2 2047.5	571.2 5598.9
SERP1 (RAMP4)	2.1	1677.5	7236.0		PSMB5 (LMPX)	1.4	386.8	1053.6
GPAA1 (GAA1) NDUFS6 (CI-13kA)	2.1) 2.1	1794.0 430.9	7652.9 1810.6		ACO2 (ACONM) SAP30	1.4 1.4	1923.3 68.9	5231.8 186.4
STMN1 (C1orf215) ALG3 (CDG1D)	2.1 2.1	1173.4 853.4	4926.9 3581.5		NDUFS3 (CI-30) NDUFS8 (CI-23k)	1.4 1.4	527.4 889.4	1423.5 2397.5
VKORC1 (EDTP30	8) 2.1	73.4	307.9		SEC24C	1.4	1393.6	3753.5
ETFDH (ETFQO) GUSB (BG)	2.1 2.1	168.7 1300.8	704.8 5413.1		CBR1 (CBR) EIF2S1 (EIF-2)	1.4 1.4	285.5 818.3	767.7 2193.9
PIGT (CGI-06)	2.1	1667.6	6921.4		GUK1 (GMK)	1.4	2225.7	5953.3
NDUFS5 (CI-15k) ARSG (USH4)	2.1 2.0	708.2 79.0	2938.3 327.4		FXN (CyaY) NDUFS1 (CI-75Kd)	1.4 1.4	198.5 763.1	528.4 2011.8
BSG (5F7) EXT1 (EXT)	2.0 2.0	2665.0 81.3	11023.9 332.1		NDUFA9 (CC6) NDUFC2 (B14.5b)	1.4 1.4	275.4 181.3	721.0 469.9
COX5A (COX)	2.0	1290.0	5264.5		IDH3A	1.4	533.3	1380.8
MGAT1 (GLCNAC- LDHB (HEL-S-281)	·TI) 2.0) 2.0	2523.4 2046.4	10208.9 8236.1		PSPH (PSP) YKT6	1.4 1.4	73.3 816.2	188.1 2096.6
ALG8 (CDG1H) PRKCSH (AGE-R2	2.0	481.0 869.2	1934.1 3494.5		COX17 PYGB (GPBB)	1.4 1.3	251.8 932.6	645.6 2376.0
EDEM1 (EDEM)	2.0	2373.1	9521.7		S100A10 (42C)	1.3	1289.5	3279.9
PSMD14 (PAD1) HEXB (ENC-1AS)	2.0 2.0	527.4 553.6	2083.7 2180.2		NDUFB8 (ASHI) ATP6V1D (ATP6M)	1.3 1.3	359.7 233.1	913.2 589.4
SUCLA2 (A-BETA)	2.0	194.6	762.3		NDUFA11 (B14.7)	1.3	207.7	522.7
PRDX1 (MSP23) PMM2 (CDG1)	2.0 2.0	1080.6 135.4	4224.0 528.1		ERP29 (C12orf8) ACADS (ACAD3)	1.3 1.3	3485.2 219.4	8756.3 548.9
GOT1 (AST1) PSMA3 (HC8)	1.9 1.9	236.6 842.9	907.8 3202.2		ACOX1 (ACOX) SRP72 (BMFF)	1.3 1.3	278.3 2361.3	694.5 5875.1
ARSB (ASB)	1.9	242.5	912.5		VDAC1 (PORIN)	1.3	1117.9	2779.3
NDUFB4 (B15) ERP44 (PDIA10)	1.9 1.9	622.5 1618.0	2328.9 6048.8		UQCRB (MC3DN3) TIMM17B (DXS9822)	1.3 1.3	599.7 702.1	1482.2 1731.3
PARP2 (ADPRT2)	1.9	249.4	928.4		GOLPH3 (GOPP1)	1.3	1474.0	3635.3
GALE (SDR1E1) GMDS (GMD)	1.9 1.9	133.0 317.4	494.9 1179.6		NDUFA2 (B8) TPI1 (HEL-S-49)	1.3 1.3	317.0 5256.8	779.8 12895.8
COX6B1 (COX6B) NUS1 (C6orf68)	1.9 1.9	1343.8 387.9	4972.5 1432.9		EIF5B (IF2) FASN (FAS)	1.3 1.3	442.2 50.2	1082.4 122.3
TFRC (CD71)	1.9	667.3	2461.6		AK3 (AK3L1)	1.3	384.1	932.5
TMEM97 (MAC30) TMEM165 (CDG2k	1.9 () 1.9	91.8 576.4	333.9 2089.7		FUT8 (CDGF) PSMA4 (HC9)	1.3 1.3	301.0 1210.4	730.1 2919.8
COX7B (APLCC) EIF4G1 (EIF-4G1)	1.8 1.8	477.1 1697.2	1698.8 6038.7		TCP1 (CCT-alpha) NDUFS7 (CI-20)	1.3 1.3	1407.5 431.3	3382.1 1035.7
CYCS (CYC)	1.8	1054.2	3736.8		NDUFS4 (AQDQ)	1.3	255.7	611.6
SRD5A3 (CDG1P) MOGS (CDG2B)	1.8 1.8	57.5 1700.6	203.7 5989.7		SRP19 TIMM13 (TIM13)	1.3 1.2	117.3 499.3	279.8 1163.4
HSD17B10 (17b-H. VCP (CDC48)	SD10 1.8 1.8	784.6 5635.2	2759.0 19725.8		EIF3J (EIF3S1) ARPC5L (ARC16-2)	1.2 1.2	206.3 1057.8	477.8 2442.4
NDUFAB1 (ACP)	1.8	519.6	1809.6		GNPDA1 (GNP1)	1.2	113.6	262.4
EIF2B3 (EIF-2B) DHDDS (CIT)	1.8 1.8	280.3 319.5	974.4 1108.4		NDUFS2 (CI-49) PGK1 (HEL-S-68p)	1.2 1.2	1738.6 5633.3	3998.6 12928.5
NDUFA1 (CI-MWF	E) 1.8	1349.0	4679.5		SUCLĠ1 (GALPHÁ) GSTZ1 (GSTZ1-1)	1.2 1.2	551.5 137.7	1265.0 315.1
ASNS (ASNSD) COX6A1 (CMTRID	1.8) 1.8	385.8 1115.1	1321.6 3774.3		ETFA (EMA)	1.2	893.4	2042.1
PSMG1 (C21LRP) RETSAT	1.8 1.8	154.1 237.7	519.5 800.7		GCDH (ACAD5) PDHB (PDHBD)	1.2 1.2	309.5 894.8	704.7 2034.8
RFT1 (CDG1N)	1.7	380.0	1278.0		NDUFA3 (B9)	1.2	506.8	1151.0
DOLPP1 (LSFR2) GALK2 (GK2)	1.7 1.7	145.0 208.2	486.9 697.2		TIMM50 (MGCA9) ISG20 (CD25)	1.2 1.2	568.8 7865.2	1287.7 17755.9
TIMM44 (TIM44) EDEM3 (C1orf22)	1.7 1.7	253.8 378.3	847.9 1256.7		NDUFB2 (AGGG) ALG11 (CDG1P)	1.2 1.2	512.6 189.7	1155.5 425.5
CHST15 (BRAG)	1.7	978.6	3223.9		GOLGA2 (GM130)	1.2	198.7	445.8
SRP68 NDUFA4 (CI-9k)	1.7 1.7	1283.1 914.3	4209.0 2994.8		ETF1 (D5S1995) GOT2 (KAT4)	1.2 1.2	819.9 985.7	1830.9 2199.6
COX8A (COX) PDHA1 (PDHA)	1.7 1.7	562.1 794.3	1835.3 2587.6		DPM2 (CDG1U) HSCB (DNAJC20)	1.2 1.1	750.9 81.1	1671.1 179.1
NDUFB7 (B18)	1.7	680.8	2203.8		SEC11A (1810012E07R	1.1	809.1	1788.7
HSPD1 (CPN60) DPM3 (CDG10)	1.7 1.7	1319.3 135.8	4270.6 436.8	The second second	MDH2 (EIEE51) MAN1B1 (ERMAN1)	1.1 1.1	2356.1 570.5	5182.9 1253.7

B Metabolism contd.

Read counts Naïve B cells Plasmablast Gene **LFC** РΒ SEC31A (ABP125) 3158.2 6900.2 EIF2B4 (EIF-2B) COX5B (COXVB) ALG6 (CDG1C) 1.1 1.1 1.1 636.7 1390.9 3443.2 582.8 1581.5 268.1 OGDH (AKGDH) 867.0 1876.6 SDHB (CWS2) EIF2B2 (EIF-2Bbeta) ADSL (AMPS) 1555.7 276.2 3354.8 593.3 1.1 641.5 1357.3 EIF5 (EIF-5) POGLUT1 (C3orf9) 3077.8 396.8 6492.6 836.1 715.9 NDUFB9 (B22) 1494.6 UROD (PCT) UQCRFS1 (MC3DN10) 957.6 1835.1 1998.2 216.5 HS2ST1 (dJ604K5.2) 450.3 1 0 1 0 1 0 151.3 67.4 722.4 CHCHD4 (MIA40) EEF1E1 (AIMP3) 312 7 ECI1 (DCI) NSDHL (H105E3) GPI (AMF) ACADM (ACAD1) 1480.7 1.0 1.0 252.8 518 4 2139.3 852.3 1.0 1.0 1.0 1.0 1738.8 SDF2 490.2 996.7 PIGH (GPI-H) DDX39A (BAT1) 354.0 2942.5 719.4 5973.7 PIGO (HPMRS2) PSMC4 (MIP224) CACYBP (GIG5) SDHC (CYB560) 1.0 1.0 1.0 1.0 807.1 1635.3 1616.1 1057.5 3258.2 2131.4 527.1 1059.6

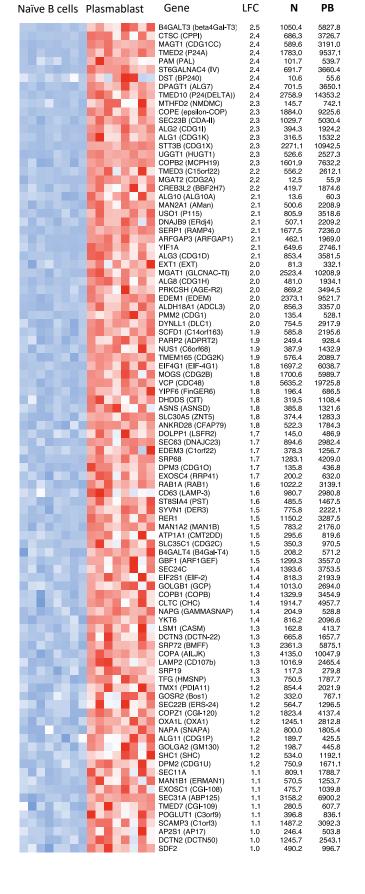
Read counts

C Antibody synthesis, glycosylation and secretion

				- iiicaa i	- read courts	
Naïve B cells	Plasmablast	Gene	LFC	N	РВ	
		GAS6 (AXLLG)	6.8	35.0	3826.8	
		XBP1 (TREB-5)	5.8	1492.4	85288.5	
		UGGT2 (HUGT2)	5.5	6.0	261.9	
		PDIA5 (PDIR)	5.4	59.4	2586.0	
		SEC11C (SEC11L3)	5.4	435.8	18508.8	
		HSP90B1 (ECGP)	5.1	3542.0	118110.4	
		CHAC1	4.9	3.7	113.9	
		SDF2L1	4.9	377.1	11202.4	
		SLC7A5	4.5	238.5	5549.0	
		STT3A (ITM1)	4.5	752.5	16571.5	
		ERN1 (IRE1)	4.4	112.9	2441.5	
		B3GNT9	4.4	15.7	323.0	
		HSPA5 (BIP)	4.3	3999.5	78254.5	
		HYOU1 (GRP-170)	4.3	344.4	6585.1	
		LMAN1 (ERGIC-53)	4.2	651.1	11850.6	
		WIPI1 (ATG18)	4.2	92.2	1672.4	
		MAN1A1 (HUMM3)	4.0	1103.1	18038.6	
		SLC1A4 (ASCT1) VEGFA (MVCD1)	4.0 3.9	317.6 17.3	4972.3 263.2	
		OSTC (DC2)	3.9	404.5	6018.0	
		SRPRB (APMCF1)	3.8	387.6	5557.4	
		C1GALT1C1 (C1GALT2	3.8	150.7	2126.5	
		SPCS3 (PRO3567)	3.8	408.7	5662.4	
		WFS1 (CTRCT41)	3.8	127.3	1728.6	
		FKBP14 (EDSKMH)	3.7	21.9	285.0	
		SEC24A	3.7	284.8	3655.8	
		PDIA6 (ERP5)	3.7	1816.3	22944.3	
		SEC24D (CLCRP2)	3.6	494.3	5874.1	
		RPN2 (RIBIIR)	3.5	3511.5	38622.2	
		RPN1 (OST1)	3.4	3145.1	33973.8	
		SEC61A1 (HNFJ4)	3.4	2559.8	27153.3	
		SAR1B (ANDD)	3.4	284.3	3006.4	
		SEC61B	3.4	607.9	6412.9	
		PSAT1 (EPIP)	3.4	85.7	890.5	
		DNAJC3 (ACPHD)	3.3	343.8	3495.0	
		DDOST (AGER1)	3.3	2965.8	28487.3	
		SEC61G (SSS1)	3.2	294.7	2792.6	
		TMED9 (GMP25) DERL3 (C22orf14)	3.2 3.2	1106.5 973.3	10303.2 8938.7	
		ALG5 (bA421P11.2)	3.1	358.2	3153.8	
		B4GALT2 (B4Gal-T2)	3.1	47.8	417.7	
		CD59	3.1	425.5	3576.3	
		CALR (CRT)	3.0	2284.7	17731.6	
		GALNT2 (CDG2T)	2.9	562.5	4308.6	
		SPCS2 `	2.8	713.7	5063.1	
		SRP54 (SCN8)	2.8	515.7	3631.0	
		SSR1 (TRAPA)	2.8	1795.0	12118.0	
		PGM3 (AGM1)	2.8	157.1	1059.7	
		SPCS1 (HSPC033)	2.7	1289.9	8648.4	
		PREB (SEC12)	2.7	1354.6	8822.3	
		GLA (GALA)	2.7	135.8	855.8	
		ST3GAL4 (CGS23)	2.7	18.0	113.1	
		KDELR1 (ERD2)	2.6	328.9	2061.0	
		UBE2J1 (CGI-76)	2.6	3906.6	24274.9	
		EDEM2 (C20orf31)	2.6	1074.4	6590.1	
		ARF4 (ARF2)	2.6	1073.7	6567.1	
		SEC13 (D3S1231E) EBGIC3 (C20orf47)	2.6 2.6	1541.5 1124.0	9317.6 6646.6	
		ERGIC3 (C20orf47) DAD1 (OST2)	2.5	1378.9	8070.3	
		DADI (0312)	2.0	13/0.9	0070.3	

C Antibody synthesis, glycosylation and secretion contd.

Read counts



Growth factors

Naïve B cells Plasmablast

Read counts Gene LFC IGF1 (IGF) BMP6 (VGR) MANF (ARMET) VEGFA (MVCD1) BMP8B (BMP8) CD320 (8D6) ADA2 (ADGF) IL12A (CLMF) MACC1 (7A5) GPI (AMF) TYMP (ECGF) RABEP2 (FRA) VEGFB (VEGFL) TGFB1 (CED) RABEP1 (RABSEP) AREG (AR) IL7 CLCF1 (BSF-3) IGF1 (IGF) 257.5 582.2 5419.6 263.2 204.5 3089.9 9077.0 201.0 106.8 4375.4 3500.0 385.1 225.8 448.9 0.9 6.6 4.5 3.9 3.2 2.8 2.6 2.0 1.9 1.0 -1.2 -1.4 -1.4 -1.9 -2.0 -4.8 -9.4 5.8 238.0 17.3 22.0 434.8 1516.1 50.5 29.0 2139.3 1733.2 899.9 582.6 1181.8 2349.8 180.8 180.8 166.2 316.3 632.6 46.7

Read counts

CLCF1 (BSF-3)

Interferon stimulated genes (ISGs)

Read counts

Naïve B cells	Plasmablast	Gene	LFC	N	РВ
		IFI27L1 (FAM14B)	4.7	41.5	1044.8
		IFI27 (FAM14D)	3.9	950.4	14292.6
		IFI6 (JUN16)	3.7	752.7	10040.3
		APOL1	3.6	173.4	2101.8
		ZBP1 (C20orf183)	3.4	514.4	5504.1
		WARS1 (IFI53)	2.5	2902.3	16004.9
		LAP3	2.5	1408.7	7740.0
		CHST12 (C4S-2)	2.4	536.0	2761.1
		PSME2 (PA28B)	2.2	2184.4	10337.8
		ISG15 (G1P2)	2.1 2.1	1234.3	5243.9 3751.8
		IFI35 (IFP35) BST2 (CD317)	2.0	894.1 1422.8	5861.5
		IFNAR2 (IFN-R)	2.0	516.4	2118.2
		TNFSF10 (TRAIL)	1.9	398.9	1467.3
		ODF3B (FAP123)	1.8	265.9	944.9
		IFI27L2 (FAM14Á)	1.8	234.1	829.8
		IFITM1 (SEP27)	1.6	1696.4	5249.4
		IFI44 (MTAP44)	1.6	421.3	1282.8
		USP18 (ISG43)	1.6	483.9	1463.1
		MX1 (IFI-78K)	1.6	4321.5	12739.2
		APOL6	1.4	462.4	1246.1
		APOBEC3G (A3G) ISG20 (CD25)	1.4 1.2	1757.3 7865.2	4609.8 17755.9
		NAPA	1.2	800.0	1805.4
		HSH2D (ALX)	1.1	2252.8	4776.2
		CGAS (C6orf150)	1.1	212.8	442.6
		OAS2	1.0	2334.9	4727.3
		IRF7 (IMD39)	1.0	2900.3	5864.0
		TYMP (ECGF)	1.0	1733.2	3500.0
		STAT1	1.0	4062.7	8189.1
		TRIM33 (ECTO)	-1.1	1482.2	708.5
		ZC3HAV1 (ARTD13) SP100	1.1	3998.7 6960.5	1893.7 3247.2
		DDIT4 (Dig2)	1.2	1482.1	644.6
		SLC15A3 (OCTP)	1.3	168.2	70.2
		RNASEL (PRCA1)	-1.3	303.0	124.8
		TRIM14	-1.4	1227.5	464.9
		ZNFX1	-1.5	2055.2	741.0
		DDX58 (RIG-I)	-1.5	690.2	239.0
		HERC6	-1.6	629.8	214.1
		SP110 (IFI41)	-1.6	342.0	112.6
		IFIT5 (ISG58) SUN2 (UNC84B)	1.7 1.7	505.9 7217.0	160.6 2277.7
		PARP12 (ARTD12)	1.8	2610.5	741.6
		PPM1K (BDP)	1.9	3131.4	837.0
		IFITM3 (1-8U)	-1.9	1803.0	481.1
		NUB1 (BS4)	-1.9	1201.1	311.2
		DTX3L	-2.0	1505.9	369.4
		XAF1 (BIRC4BP)	-2.1	1707.4	391.8
		IFITM2 (1-8D)	2.2	5307.0	1181.0
		MX2 (MXB) GBP2	2.6 2.6	928.6 1268.2	158.4 214.8
		LGALS9 (HUAT)	2.6	466.7	78.5
		IFIT3 (CIG-49)	2.8	1108.9	161.7
		MAP3K14 (FTDCR1B)	2.8	1777.6	253.7
		CD74 (DHLAG)	-3.1	239785.9	27652.9
		JADE2 (JADE-2)	-3.3	1207.8	121.8
		TRIM22	-4.0	6784.2	415.7
		DDX60L	-4.4	636.1	30.3
		IFIT2 (G10P2)	-4.6	628.5	25.8
		DDX60 GBP4 (Mpa2)	-4.7 -4.9	745.4 2651.8	28.4 91.1
		UDI 4 (IVIPAZ)	-4.5	2001.0	91.1

Transcription factors

Naïve B cells	Plasmablast	Gene	LFC	N	PB
		BHLHA15 (BHLHB8)	7.7	7.3	1483.0
		MIXL1 (MILD1)	7.0	4.4	558.9
		TP73 (P73)	6.5	4.3	393.5
		XBP1 (TRÉB-5)	5.8	1492.4	85288.5
		E2F7	5.2	4.3	152.1
		PRDM1 (BLIMP1)	5.0	313.6	9903.2
		ZNF215 (BAZ-2)	4.8	13.2	369.0
		MSC (ABF-1)	4.5	6.0	133.5
		ARNTL2 (BMAL2)	4.4	9.5	207.2
		E2F8 (E2F-8)	4.3	9.6	185.1
		CENPA (CENP-A)	4.0	19.3	303.8
		FOXM1 (FKHL16)	3.9	44.1	661.6
		GFI1 (GFI-1)	3.9	46.0	673.9
		ATF5 (ATFX)	3.5	9.1	101.0
		E2F2 (E2F-2)	3.3	130.9	1272.7
		GLMP (C1orf85)	3.2	90.5	807.4
		MYBL2 (B-MYB)	3.1	1662.3	14554.4
		RUNX2 (AML3)	3.0	45.0	351.2
		ARID3A (BRIGHT)	2.9	98.0	707.3
		PRDM15 (C21orf83)	2.8	291.4	2073.3
		E2F1 (E2F-1)	2.8	114.9	807.0
		ZBTB32 (FAXF)	2.8	220.4	1539.2
		PREB (SEC12)	2.7	1354.6	8822.3
		MXD3 (BHLHC13)	2.6	88.5	542.6
		BHLHE41 (BHLHB3)	2.6	100.8	610.3
		IRF4 (LSIRF)	2.4	1254.9	6591.9
		CREB3L2 (BBF2H7) ZBTB38 (CIBZ)	2.2 2.0	419.7 534.7	1874.6 2195.9
		CREB3 (LUMAN)	2.0	672.3	2680.2
		KLF10 (EGR-alpha)	2.0	563.9	2231.0
		TET1 (CXXC6)	1.9	30.0	111.8
		NFE2L3 (NRF3)	1.9	34.7	126.8
		HMGA1 (HMG-R)	1.6	994.4	2986.5
		STAT4 (SLEB11)	1.5	71.5	206.0
		POU2AF1 (BOB1)	1.5	2718.5	7555.2
		ZNF706 (HSPC038)	1.4	1416.1	3838.1
		ZNF841	1.4	100.9	269.9
		ZFAT (AITD3)	1.4	190.1	495.9
		ZEB2 (HSPC082)	-4.8	1891.9	67.3
		ZNF835 (BC37295_3)	-4.8	117.5	4.0
		ZBTB4 (KAISO-L1)	-4.8	985.1	34.8
		ZNF318 (HRIHFB2436)	-4.8	5079.7	178.3
		PAX5 (ALL3)	-4.8	3163.9	110.5
		L3MBTL3 (MBT-1)	-4.9	238.2	7.9
		ZNF439	-4.9	306.0	10.5
		IRF8 (H-ICSBP)	-5.0	15464.6	486.8
		REL (C-Rel)	-5.1	2072.0	59.0
		ZNF699 (hang)	-5.1 5.0	131.7 349.1	3.5 9.9
		JAZF1 (TIP27) ZMAT1	-5.2 -5.3	196.4	9.9 4.6
		BCL11A (BCL11A-L)	-5.4	2183.9	50.0
		ZNF677	-5.5	150.8	3.1
		FOXP1 (12CC4)	-5.6	9804.8	206.9
		ZNF502	-5.6	131.0	2.6
		SATB1	5.6	1244.9	25.6
		TGIF1 (HPE4)	-5.9	785.6	13.4
		SCML4 (dJ47M23.1)	-6.1	528.3	7.5
		ZNF831 (C20orf174)	-6.3	310.5	3.8
		ZNF665 (ZFP160L)	-6.3	140.2	1.7
		ZNF571 (HSPC059)	-6.7	133.8	1.2
		ZBTB16 (PLZF)	-7.0	2480.2	19.7
		ZSCAN18 (ZNF447)	-7.0	539.2	3.9
		KLF9 (BTEB)	-7.1	306.8	2.3
		ZNF629 (ZNF)	-7.2	148.1	1.1
		HHEX (HEX)	7.4	2173.0	13.2
		SPIB (SPI-B)	-7.4 7.4	3292.6	19.3
		BACH2 (BTBD25)	7.4 7.6	2591.8	14.6
		CASZ1 (CAS11) ZFP28 (mkr5)	8.6	118.1 110.2	0.7 0.0
		ZNF415 (Pact)	-8.6	113.9	0.0
		ZNF667 (MIPU1)	9.0	143.8	0.0
		ZNF135 (ZNF61)	-9.6	231.0	0.0

SUPPLEMENTARY FIG 2 Heat maps of the differentially expressed genes (DEGs) pertaining to select biological processes. Heatmaps show genes related to (A) Proliferation, (B) Metabolism, (C) Antibody synthesis, glycosylation and secretion, (D) Growth factors, (E) Transcription factors (TFs) – top 50 upregulated and top 50 downregulated and (F) Interferon stimulated genes (ISGs). Gradient of high to low gene expression based on z-score normalized counts is indicated from red to blue color. Genes that were significantly differential are shown. Right side of heatmaps are gene name with common name in parenthesis, log2 fold change (LFC), average normalized counts of naïve B cells (N) and average normalized counts of plasmablast (PB).