

### Supplemental File I: Gene sets for cluster determination

<b>Geneset_name</b>	<b>Genes used for identification of cell types</b>
IMMUNE_Bindea_Cell_aDC_Median_Immunity.2013_PMID.24138885	Ido1, Oas3, Ccl1, Ebi3, Lamp3
IMMUNE_Bindea_Cell_Bcells_Median_Immunity.2013_PMID.24138885	Tnfrsf17, Blk, Cd19, Ms4a1, Cd72, Cr2, Coch, Dtnb, Gldc, Gng7, H2-Ob, H2-Aa, Mef2c, Abcb4, Pnoc, Scn3a, Slc15a2, Spib, Tci1, Ccr9, Blnk, Bcl11a, Qrs1, Mical3, Bach2, Osbp10
IMMUNE_Bindea_Cell_DC_Median_Immunity.2013_PMID.24138885	Hsd11b1, Npr1, Ccl2, Ccl17, Ccl22, Ppfibp2, Cd209e Blvrb, Csf1r, Ctns, F13a1, Fabp4, Fzd2, Guca1a, Tacstd2, Mmp12,
IMMUNE_Bindea_Cell_iDC_Median_Immunity.2013_PMID.24138885	Pparg, Prep, Rap1gap, Pdxk, Ch25h, Abcg2, Hs3st2, Clec10a, Vash1, Slc7a8, Syt17, Nudt9, Card9, Ms4a6d, Slc26a6, Dcstamp, Lman2l Apoe, Bcat1, Scarb2, Cd68, Chil1, Chit1, Col8a2, Cybb, Emp1, Fdx1, Gpc4, Fn1, Gm2a, Me1, Msr1, Ptgds, Scg5, Sult1c2, Marco, Cd84,
IMMUNE_Bindea_Cell_Macrophages_Medium_Immunity.2013_PMID.24138885	Cd163, Atg7, Clec5a, Rai14, Pcolce2, Ms4a4a, Dnase2b, Colec12, Sgms1, Ctsk
IMMUNE_Bindea_Cell_Mastcells_Median_Immunity.2013_PMID.24138885	Adcyap1, Nr0b1, Calb2, Cma1, Cpa3, Ctsg, Elane, Ms4a2, Gata2, Hdc, Hpgd, Kit, Vwa5a, Mpo, Prg2, Ptgs1, Slc18a2, Tal1, Tpsb2, Scg2, Abcc4, Hpgds, Slc24a3, Ppm1h, Tpsb2, Mlph, Maob Alpl, Bst1, Csf3r, Fcgr4, Fpr1, Fpr2, Cxcr1, Cxcr2, Kcnj15, Cyp4f13,
IMMUNE_Bindea_Cell_Neutrophils_Medium_Immunity.2013_PMID.24138885	Mme, Pde4b, Slc22a4, Dysf, H2bc8, Mgam, Creb5, Tecpr2, Hpse, Cd93, G0s2, Slc25a37, Cpped1, Crispld2
IMMUNE_Bindea_Cell_NKcells_Median_Immunity.2013_PMID.24138885	Adarb1, Aldh1b1, Apbb2, Bcl2, Cdc5l, Gnas, Igfbp5, Psmd4, Xcl1, Spn, Tbxa2r, Zfp13, Pdlim4, Fgf18, Mcm3ap, Ncr1, Mrc2, Ldb3, Mapre3, Kank2, Fzr1, Trpv6, Ppp4r3a, Prx, Tinagl1, Atl2, Slc30a5, Tctn2, Sgms1
IMMUNE_Bindea_Cell_pDC_Median_Immunity.2013_PMID.24138885	Il3ra
IMMUNE_Bindea_Cell_Tcells_Median_Immunity.2013_PMID.24138885	Cd2, Cd3d, Cd3e, Cd3g, Cd6, Cd28, Lck, Sh2d1a, Prkcq, Skap1, Itm2a, Cd96, Trat1, Bcl11b, Ncald
IMMUNE_Bindea_Cell_T helpercells_Median_Immunity.2013_PMID.24138885	Cd28, Lrba, Atf2, Nap1l4, Rpa1, Ube2l3, Slc25a12, Itm2a, Sec24c, Batf, Yme1l1, Srsf10, Asf1a, Icos, Phf10, Nup107, Fam111a, Ddx50, Bora, Fryl Vpreb3, Tnfrsf17, Tci1, Spib, Rnase6, Rasgrp3, Ralgps2, Pnoc, P2ry14, P2rx5, Ms4a1, H2-Aa, H2-Ob, Hhex, Gng7, Fcgr2b, Fcer2a, Eaf2, Cxcr5, Cr2, Cd79b, Cd79a, Cd72, Cd40, Cd37, Cd22, Cd19, Cd180, Blk, Bcl7a, Bank1, Bach2, Alox5, Adam28, Abcb4
B-cell_ASH	Tnfrsf17, Tnfrsf13b, Pou2af1, Pax5, Ms4a1, Fcrla, Fcrl5, Fcrl1, Fcer2a, Cxcr5, Cd79b, Cd79a, Cd19, Bank1
B-cell_PEROU	

Vpreb3, Tnfrsf17, Tnfrsf13b, Tcl1, Tcf4, Syk, Spib, Rnase6, Rasgrp3, Ralgps2, Pou2af1, Pnoc, Pax5, P2ry14, P2rx5, Ms4a1, H2-Ea-ps, H2-Ab1, H2-Aa, H2-Ob, Hhex, Gng7, Gga2, Fcrla, Fcrl5, Fcrl1, Fcgr2b, Fcer2a, Ebf1, Eaf2, Cxcr5, Cr2, Cd79b, Cd79a, Cd74, Cd72, Cd40, Cd37, Cd22, Cd19, Cd180, Blnk, Blk, Bcl7a, Bcl11a, Bank1, Bach2, Alox5, Aff3, Adam28, Abcb4

Vpreb3, Tnfrsf17, Tcl1, Tcf4, Spib, Pou2af1, Pnoc, Pax5, P2rx5, H2-Ea-ps, H2-Ab1, H2-Aa, Fcrla, Fcer2a, Ebf1, Cd79a, Cd72, Cd40, Cd22, Cd19, Blnk, Blk, Bcl11a, Bank1

Zap70, Ubash3a, Trat1, Tnfrsf4, Tnfrsf14, St8sia1, Sit1, Sh2d1a, Ptgir, Ptger2, Prf1, Pdcd1, Nkg7, Map4k1, Ly9, Lta, Lef1, Lck, Lat, Klrg1, Klrd1, Klrba1a, Itk, Il7r, Il2ra, Il21, Il18rap, Icos, Gzmm, Gzmd, Gzma, Gpr171, Gfi1, Foxp3, Flt3l, Dusp2, Dsc1, Dgka, Cxcr6, Ctsw, Ctla4, Cst7, Crtam, Cd96, Cd8a, Cd7, Cd6, Cd5, Cd40lg, Cd4, Cd3g, Cd3e, Cd3d, Cd300a, Cd28, Cd247, Cd244a, Cd2, Cd160, Ccr7, Ccr5, Ccnd2, Ccl5, Ccl4, Bcl2a1a, Bcl11b, Ankrd55, Acap1

Zap70, Ubash3a, Trat1, Tigit, Themis, Tbx21, Spock2, Slamf1, Sla2, Sit1, Sh2d1a, Samd3, Prf1, Pdcd1, Nkg7, Map4k1, Ly9, Lta, Lck, Lat, Itk, Icos, Gzmm, Gzmk, Gzma, Gpr171, Gfi1, Cxcr6, Cxcr3, Ctla4, Cst7, Crtam, Cd96, Cd8a, Cd7, Cd6, Cd5, Cd40lg, Cd3g, Cd3e, Cd3d, Cd27, Cd247, Cd2, Ccr2, Ccl5, Acap1

Zap70, Ubash3a, Trat1, Tnfrsf4, Tnfrsf25, Tnfrsf14, Tigit, Themis, Tbx21, St8sia1, Spock2, Slamf1, Sla2, Sh2d1a, Samd3, Ptgir, Ptger2, Prf1, Pdcd1, Nr3c2, Nosip, Nkg7, Mal, Lrrn3, Lef1, Ldlrap1, Lck, Lat, Klrg1, Klrd1, Klrba1a, Itk, Il7r, Il2ra, Il21, Il18rap, Icos, Gzmk, Gzmd, Gzma, Gpr171, Gfi1, Foxp3, Flt3l, Fbln5, Ephx2, Ephb6, Dusp2, Dsc1, Dgka, Cxcr6, Cxcr3, Ctsw, Ctla4, Cst7, Crtam, Cish, Cdr2, Cd96, Cd8a, Cd7, Cd6, Cd5, Cd40lg, Cd4, Cd3g, Cd3e, Cd3d, Cd300a, Cd28, Cd27, Cd247, Cd244a, Cd2, Cd160, Ccr7, Ccr5, Ccr4, Ccr2, Ccnd2, Ccl5, Ccl4, Bcl2a1a, Bcl11b, Ankrd55

Ubash3a, Tnfrsf25, Themis, Nr3c2, Nosip, Mal, Lrrn3, Lef1, Ldlrap1, Il7r, Icos, Fbln5, Ephx2, Ephb6, Cish, Cdr2, Cd6, Cd5, Cd40lg, Cd3g, Cd3e, Ccr4