

BD Rhapsody™ Immune Response Panel Hs

BD Biosciences Kit Part Number: 633750

Purpose

The BD Rhapsody Immune Response Panel Hs is a set of ready-to-use primer pools to use with the BD Rhapsody™ Single-Cell Analysis system. The panel consists of two sets of 399 primers: one pool of PCR1 primers for the first round of amplification of gene targets of interest and a second pool of nested primers to maximize specificity for the second round of amplification.

Contents

Panel	PN	Component	Cap color	Quantity	Volume per unit (µL)	Storage
BD Rhapsody Immune Response Panel Hs (PN 633750)	650000083	PCR1 Primers-Immune Response Panel Hs (tube label: PCR1-Immune Res. Hs)	Blue	1 vial	210	-25°C to -15°C
	650000084	PCR2 Primers-Immune Response Panel Hs (tube label: PCR2-Immune Res. Hs)	Blue	1 vial	50	

Gene symbol	Accession number	Poly(A) site ¹	Common name	Function/process	Cell type specificity	Verified ²
ADA	NM_000022.3	chr20:44619524	—	Enzyme	Non-classical monocyte	U; M
ADGRE1	NM_001974.4	chr19:6940451	—	G-protein coupled receptor	—	U; M
ADGRG3	NM_170776.4	chr16:57689375	—	G-protein coupled receptor	—	U; M
AIM2	NM_004833.1	chr1:159062486	—	Miscellaneous	—	U; M
ALAS2	NM_000032.4	chrX:55009059	—	Cell type marker	RBC	U
ANXA5	NM_001154.3	chr4:121668000	—	Transporter	Monocyte; T subset	U; M
AOC3	NM_003734.3	chr17:42858130	—	Enzyme	—	U; M
APOBEC3G	NM_021822.3	chr22:39087604	—	Enzyme	—	U; M
APOE	NM_000041.3	chr19:44909391	—	Apoptosis regulator	—	—
AQP9	NM_020980.4	chr15:58185903	—	Transporter	—	M
ARG1	NM_000045.3	chr6:131584325	—	Enzyme	—	U; M
ARL4C	NM_005737.3	chr2:234493045	ARL7; LAK	Enzyme	—	U; M
ATF6B	NM_004381.4	chr6:32115537	—	Transcription factor	—	U; M
AURKB	NM_004217.3	chr17:8204740	—	Cell cycle (M phase)	—	U; M U; M
AZU1	NM_001700.4	chr19:832018	—	Cell type marker	Granulocyte	U; M
B3GAT1	NM_018644.3	chr11:134378766	CD57	CD marker	—	U; M
BACH2	NM_021813.3	chr6:89926536	—	Transcription factor	—	U; M
BAX	NM_001291428.1	chr19:48961793	—	Apoptosis regulator	—	U; M
BCL11B	NM_022898.2	chr14:99169291	—	Transcription factor	—	U; M
BCL2	NM_000633.2	chr18:63123346	—	Apoptosis regulator	—	U; M
BCL2A1	NM_004049.3	chr15:79960955	—	Apoptosis regulator	—	U; M
BCL6	NM_001706.4	chr3:187721385	—	Transcription factor	—	U, M
BIN2	NM_016293.3	chr12:51281039	—	Miscellaneous	—	U; M
BIRC3	NM_001165.4	chr11:102337727	—	Enzyme	—	U; M
BLK	NM_001715.2	chr8:11564597	—	Kinase	—	U; M
BLNK	NM_013314.3	chr10:96191847	—	Miscellaneous	—	U; M
BPI	NM_001725.2	chr20:38337503	—	Cell type marker	Granulocyte	U; M
BTG1	NM_001731.2	chr12:92143364	—	Transcription factor	—	U; M
BTLA	NM_181780.3	chr3:112465936	CD272	CD marker	—	U; M
C10orf54	NM_022153.1	chr10:71750316	VISTA	Immune checkpoint	Monocyte; T subset	U; M
C1QA	NM_015991.2	chr1:22639605	—	Complement protein	—	U; M
C1QB	NM_000491.3	chr1:22661529	—	Complement protein	—	M
CASP5	NM_004347.3	chr11:104994245	—	Miscellaneous	—	U; M
CBLB	NM_170662.4	chr3:105658273	—	Miscellaneous	—	U; M

¹The coordinates are based on human genome assembly GRCh38/hg38.

²U: Gene expression detected in 10 ng of a universal human reference RNA. M: Gene expression detected across 3,201 human PBMCs.

Gene symbol	Accession number	Poly(A) site ¹	Common name	Function/process	Cell type specificity	Verified ²
CCL1	NM_002981.2	chr17:34360383	—	Chemokine	—	U
CCL13	NM_005408.2	chr17:34358608	MCP-4	Chemokine	—	—
CCL17	NM_002987.2	chr16:57416061	TARC	Chemokine	—	—
CCL19	NM_006274.2	chr9:34689573	—	Chemokine	—	U
CCL2	NM_002982.3	chr17:34257197	MCP1	Chemokine	—	U; M
CCL20	NM_004591.2	chr2:227817564	LARC	Chemokine	—	U; M
CCL22	NM_002990.4	chr16:57366187	—	Chemokine	—	U; M
CCL3	NM_002983.2	chr17:36088259	MIP-1alpha	Chemokine	—	U; M
CCL4	NM_002984.3	chr17:36105612	MIP-1beta	Chemokine	—	U; M
CCL5	NM_002985.2	chr17:35871497	RANTES	Chemokine	Cytotoxic T; NK	U; M
CCND2	NM_001759.3	chr12:4305162	—	Cell cycle (checkpoint)	—	U; M
CCR1	NM_001295.2	chr3:46201949	—	Chemokine receptor	—	U; M
CCR10	NM_016602.2	chr17:42679408	—	Chemokine receptor	—	U; M
CCR2	NM_001123041.2	chr3:46360923	—	Chemokine receptor	—	U; M
CCR3	NM_001837.3	chr3:46266706	—	Chemokine receptor	—	U; M
CCR4	NM_005508.4	chr3:32954911	—	Chemokine receptor	—	M
CCR5	NM_000579.3	chr3:46376199	CD195	Chemokine receptor	—	U; M
CCR7	NM_001838.3	chr17:40553895	—	Chemokine receptor	—	U; M
CCR8	NM_005201.3	chr3:39333680	—	Chemokine receptor	—	U; M
CCR9	NM_006641.3	chr3:45902995	—	Chemokine receptor	T subset	U; M
CD14	NM_000591.3	chr5:140631733	—	Cell type marker	Monocyte	U; M
CD160	NM_007053.3	chr1:145738872	—	CD marker	—	M
CD163	NM_004244.5	chr12:7471240	—	CD marker	—	U; M
CD1A	NM_001763.2	chr1:158258265	—	CD marker	—	U; M
CD1B	NM_001764.2	chr1:158328176	—	CD marker	—	U; M
CD1C	NM_001765.2	chr1:158293613	—	Cell type marker	Dendritic	U; M
CD2	NM_001767.3	chr1:116768823	—	Cell type marker	Pan T	U; M
CD2	NM_001767.3	chr1:116769226	—	Cell type marker	Pan T	U; M
CD200	NM_005944.6	chr3:112362808	—	CD marker	—	U; M
CD209	NM_021155.3	chr19:7739999	—	CD marker	—	U; M
CD22	NM_001771.3	chr19:35347355	—	CD marker	B	U; M
CD24	NM_013230.3	chr6:106969831	—	CD marker	—	U; M
CD244	NM_016382.3	chr1:160830210	2B4	CD marker	Monocyte; NK	U; M
CD247	NM_000734.3	chr1:167430642	CD3Z	CD marker	—	U; M
CD27	NM_001242.4	chr12:6451710	—	CD marker	—	U; M
CD274	NM_014143.3	chr9:5470490	PD-L1	CD marker	—	U; M
CD28	ENST00000374481.7	chr2:203737830	—	CD marker	—	U; M
CD300A	NM_007261.3	chr17:74484788	—	CD marker	—	U; M
CD33	NM_001772.3	chr19:51240014	SIGLEC3	CD marker	Monocyte	U; M

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CD34	NM_001773.2	chr1:207886541	—	CD marker	Hematopoietic stem	U; M
CD36	NM_000072.3	chr7:80674159	—	CD marker	Monocyte	U; M
CD37	NM_001774.2	chr19:49340601	—	CD marker	Monocyte	U; M
CD38	NM_001775.3	chr4:15853226	—	CD marker	—	U; M
CD3D	NM_000732.4	chr11:118339077	—	Cell type marker	Pan T	U; M
CD3E	NM_000733.3	chr11:118316170	—	Cell type marker	Pan T	U; M
CD3G	NM_000073.2	chr11:118353288	—	Cell type marker	T subset	U; M
CD4	NM_000616.4	chr12:6820809	—	Cell type marker	T subset	U; M
CD40	NM_001250.5	chr20:46129512	—	CD marker	—	U; M
CD44	NM_000610.3	chr11:35232331	—	CD marker	—	U; M
CD48	NM_001778.3	chr1:160678749	BLAST	CD marker	—	U; M
CD5	NM_014207.3	chr11:61127767	Leu1	CD marker	T	U; M
CD52	NM_001803.2	chr1:26320521	—	CD marker	—	U; M
CD6	NM_006725.4	chr11:61020373	—	CD marker	—	U; M
CD63	NM_001780.5	chr12:55725475	—	CD marker	T subset; monocyte	U; M
CD69	NM_001781.2	chr12:9752552	—	Cell type marker	Activated	U; M
CD7	NM_006137.6	chr17:82314874	—	CD marker	—	U; M
CD70	NM_001252.4	chr19:6585840	—	CD marker	—	U; M
CD72	NM_001782.2	chr9:35609979	—	CD marker	—	U; M
CD74	NM_004355.3	chr5:150401643	HLA-DG	Cell type marker	Antigen presenting	U; M
CD79A	NM_001783.3	chr19:41881370	—	Cell type marker	B	U; M
CD79B	NM_000626.2	chr17:63928742	—	Cell type marker	B	U; M
CD80	NM_005191.3	chr3:119524274	B7-1	CD marker	—	U; M
CD86	NM_006889.4	chr3:122119549	—	CD marker	—	U; M
CD8A	NM_001768.6	chr2:86784612	—	Cell type marker	T subset	U; M
CD8B	NM_004931.4	chr2:86841566	—	Cell type marker	T subset	U; M
CD9	NM_001769.3	chr12:6237982	—	CD marker	—	U; M
CEACAM8	NM_001816.3	chr19:42580245	CD66b	Cell type marker	Granulocyte	—
CHI3L1	NM_001276.2	chr1:203179149	—	Enzyme	Granulocyte	U; M
CHI3L2	NM_004000.2	chr1:111243435	—	Enzyme	—	U; M
CLC	NM_001828.5	chr19:39731257	—	Cell type marker	Basophil; eosinophil	U; M
CLEC10A	NM_006344.2	chr17:7074797	—	Cell adhesion	Dendritic	U; M
CLEC4D	NM_080387.4	chr12:8521377	BDCA-2; CD303	Cell adhesion	—	U; M
CLEC4E	NM_014358.3	chr12:8534485	—	Cell adhesion	Monocyte	U; M
CMKLR1	NM_004072.2	chr12:108288049	—	G-protein coupled receptor	—	U; M
CMTM2	NM_144673.2	chr16:66588181	—	Cytokine	—	U; M
CNOT2	NM_014515.5	chr12:70354991	—	Transcription factor	—	U; M
CNTNAP3	NM_033655.3	chr9:39072767	—	Miscellaneous	—	U
CPA3	NM_001870.3	chr3:148897089	—	Cell type marker	Mast	U; M

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CR2	NM_001877.4	chr1:207489884	CD21	CD marker	—	U; M
CSF2	NM_000758.3	chr5:132076165	GM-CSF	Cytokine	—	U; M
CSF3	NM_000759.3	chr17:40017811	G-CSF	Cytokine	—	U
CST7	NM_003650.3	chr20:24959919	—	Cell type marker	Cytotoxic T; NK	U; M
CTLA4	NM_005214.4	chr2:203873963	—	Immune checkpoint	—	U; M
CTSD	NM_001909.4	chr11:1752815	—	Enzyme	—	U; M
CTSG	NM_001911.2	chr14:24573557	—	Enzyme	—	U; M
CTSW	NM_001335.3	chr11:65883737	—	Cell type marker	Cytotoxic T; NK	U; M
CX3CR1	NM_001337.3	chr3:39263497	—	Chemokine	—	U; M
CXCL1	NM_001511.3	chr4:73871101	—	Chemokine	—	U; M
CXCL10	NM_001565.3	chr4:76021121	—	Chemokine	—	U; M
CXCL11	NM_005409.4	chr4:76033799	—	Chemokine	—	U
CXCL13	NM_006419.2	chr4:77611831	—	Chemokine	—	U
CXCL16	NM_022059.3	chr17:4733541	—	Chemokine	Monocyte	U; M
CXCL2	NM_002089.3	chr4:74097185	—	Chemokine	—	U; M
CXCL3	NM_002090.2	chr4:74036589	—	Chemokine	—	U; M
CXCL5	NM_002994.4	chr4:73995872	—	Chemokine	—	U; M
CXCL8	NM_000584.3	chr4:73743713	IL8	Chemokine	—	U; M
CXCL9	NM_002416.2	chr4:76001472	—	Chemokine	—	U
CXCR1	NM_000634.2	chr2:218163327	IL8RA	Chemokine receptor	—	M
CXCR2	NM_001557.3	chr2:218137068	—	Chemokine receptor	—	U; M
CXCR3	NM_001504.1	chrX:71615921	—	Chemokine receptor	—	U; M
CXCR4	NM_003467.2	chr2:136114351	CD184	Chemokine receptor	—	U; M
CXCR5	NM_001716.4	chr11:118896261	—	Chemokine receptor	—	U; M
CXCR6	NM_006564.1	chr3:45948347	—	Chemokine receptor	—	M
DEFA3	NM_005217.3	chr8:7015871	—	Cell type marker	Granulocyte	U
DEFA4	NM_001925.2	chr8:6935826	—	Cell type marker	Granulocyte	U
DOCK8	NM_203447.3	chr9:465251	—	Miscellaneous	—	U; M
DPP4	NM_001935.3	chr2:161992364	CD26	CD marker	—	U; M
DUSP1	NM_004417.3	chr5:172768379	—	Stress response	—	U; M
DUSP2	NM_004418.3	chr2:96143178	—	Miscellaneous	—	U; M
DUSP4	NM_001394.6	chr8:29333066	—	Miscellaneous	—	U; M
EBF1	NM_024007.4	chr5:158695922	—	Transcription factor	B	U; M
EGR1	NM_001964.2	chr5:138469025	—	Stress response	—	U; M
EGR3	NM_004430.2	chr8:22687661	—	Stress response	—	U; M
ELANE	NM_001972.3	chr19:856242	—	Cell type marker	Neutrophil	U; M
ENTPD1	NM_001776.5	chr10:95867909	CD39	CD marker	—	U; M
EOMES	NM_005442.3	chr3:27715956	—	Transcription factor	T subset	U; M
EPX	NM_000502.5	chr17:58205174	—	Cell type marker	Eosinophil	—
F13A1	NM_000129.3	chr6:6144078	—	Enzyme	Monocyte	U; M
F5	NM_000130.4	chr1:169514171	—	Enzyme	Monocyte	U; M

Gene symbol	Accession number	Poly(A) site ¹	Common name	Function/process	Cell type specificity	Verified ²
FAM129C	NM_173544.4	chr19:17553638	—	Miscellaneous	B	U; M
FAM65B	NM_014722.3	chr6:24804286	—	Kinase	B	U; M
FAS	NM_000043.5	chr10:89015783	CD95	CD marker	—	U; M
FASLG	NM_000639.2	chr1:172666868	CD95LG	Cytokine	—	M
FCER1A	NM_002001.3	chr1:159308224	—	Immune receptor	—	M
FCER1G	NM_004106.1	chr1:161219243	—	Immune receptor	Monocyte; NK	U; M
FCER2	NM_002002.4	chr19:7688778	CD23	CD marker	—	U; M
FCGR3A	NM_000569.6	chr1:161542009	CD16a	Cell type marker	Monocyte	M
FCN1	NM_002003.3	chr9:134909592	—	Miscellaneous	Monocyte	U; M
FLT3	NM_004119.2	chr13:28003618	CD135	CD marker; kinase	Dendritic	U; M
FN1	NM_002026.3	chr2:215360865	—	Miscellaneous	Macrophage	U; M
FOSB	NM_006732.2	chr19:45475177	—	Stress response	—	U; M
FOSL1	NM_005438.4	chr11:65892223	—	Transcription factor	—	U; M
FOXO1	NM_002015.3	chr13:40555770	—	Transcription factor	—	U; M
FOXP1	NM_032682.5	chr3:70956127	—	Transcription factor	—	U; M
FOXP3	NM_014009.3	chrX:49250440	—	Cell type marker	T subset	U; M
FTH1	NM_002032.2	chr11:61964285	—	Enzyme	Monocyte	U; M
FUT4	NM_002033.3	chr11:94549890	—	CD marker	—	U; M
FYB	NM_001465.4	chr5:39105321	—	Miscellaneous	T subset	U; M
FYN	NM_002037.5	chr6:111661342	—	Kinase	—	U; M
GAB2	NM_012296.3	chr11:78215514	—	Miscellaneous	—	U; M
GAPDH	NM_002046.5	chr12:6538369	—	Metabolism	—	U; M
GIMAP2	NM_015660.2	chr7:150693637	—	Enzyme	—	U; M
GIMAP5	NM_018384.4	chr7:150743580	—	Enzyme	—	U; M
GNAI2	NM_002070.3	chr3:50259346	—	Enzyme	—	U; M
GNLY	NM_006433.4	chr2:85698743	—	Effector molecule	Cytotoxic T; NK	U; M
GZMA	NM_006144.3	chr5:55110248	—	Effector molecule	Cytotoxic T; NK	U; M
GZMB	NM_004131.4	chr14:24630959	CTLA1	Effector molecule	Cytotoxic T; NK	M
GZMH	NM_033423.4	chr14:24606489	—	Effector molecule	Cytotoxic T; NK	M
GZMK	NM_002104.2	chr5:55034131	—	Effector molecule	Cytotoxic T; NK	M
HAVCR2	NM_032782.4	chr5:157086100	TIM-3	Immune checkpoint	T subset	U; M
HLA-A	NM_002116.7	chr6:29945764	—	MHC class I	All nucleated; housekeeping	U; M
HLA-DMA	NM_006120.3	chr6:32948619	—	MHC class II	Antigen presenting	U; M
HLA-DPA1	NM_033554.3	chr6:33065163	—	MHC class II	Antigen presenting	U; M
HLA-DQB1	NM_002123.4	chr6:32659937	—	MHC class II	Antigen presenting	U; M
HLA-DRA	NM_019111.4	chr6:32444940	—	MHC class II	Antigen presenting	U; M
HMMR	NM_012484.2	chr5:163491938	—	Cell cycle (M phase)	—	U; M
ICAM1	NM_000201.2	chr19:10286614	—	Cell adhesion	—	U; M
ICOS	NM_012092.3	chr2:203961572	—	Immune receptor	—	U; M

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IER3	NM_003897.3	chr6:30743201	—	Stress response	—	U; M
IFITM2	NM_006435.2	chr11:309395	—	Miscellaneous	Monocyte	U; M
IFITM3	NM_021034.2	chr11:319677	—	Miscellaneous	Monocyte	U; M
IFNA1	NM_024013.2	chr9:21441316	—	Cytokine	—	U
IFNG	NM_000619.2	chr12:68154770	—	Cytokine	—	U; M
IFNGR1	NM_000416.2	chr6:137197486	—	Cytokine receptor	—	U; M
IGBP1	NM_001551.2	chrX:70166140	—	Miscellaneous	B	U; M
IGHA1 _secreted	ENST00000633714.1	KI270846.1:174887	—	Immunoglobulin	B; plasma	U; M
IGHD _membrane	ENST00000390556.6	chr14:105836767	—	Immunoglobulin	B; plasma	M
IGHE _secreted	ENST00000390541.2	chr14:105599944	—	Immunoglobulin	B; plasma	U; M
IGHG1 _membrane	ENST00000390548.6	chr14:105736343	—	Immunoglobulin	B; plasma	U; M
IGHG1 _secreted	ENST00000390542.6	chr14:105741340	—	Immunoglobulin	B; plasma	U; M
IGHG2 _secreted	ENST00000390545.2	chr14:105643070	—	Immunoglobulin	B; plasma	U; M
IGHG3 _secreted	ENST00000390551.6	chr14:105769104	—	Immunoglobulin	B; plasma	U; M
IGHG4 _secreted	ENST00000390543.3	chr14:105624344	—	Immunoglobulin	B; plasma	U; M
IGHM _membrane	ENST00000637539.1	chr14:105851709	—	Immunoglobulin	B; plasma	M
IGHM _secreted	ENST00000390559.6	chr14:105854224	—	Immunoglobulin	B; plasma	M
IGKC	ENST00000390237.2	chr2:88857168	—	Immunoglobulin	B; plasma	U; M
IGLC3	ENST00000390325.2	chr22:22906803	—	Immunoglobulin	B; plasma	U; M
IKZF1	NM_006060.5	chr7:50404179	—	Transcription factor	—	U; M
IKZF2	NM_016260.2	chr2:212999804	ZNFN1A2	Transcription factor	—	U; M
IL12A	NM_000882.3	chr3:159996019	IL12	Interleukin	—	U; M
IL12RB1	NM_005535.2	chr19:18059073	—	Interleukin	—	U; M
IL12RB2	NM_001559.2	chr1:67396900	—	Interleukin	—	U; M
IL13	NM_002188.2	chr5:132661111	—	Interleukin	—	U
IL15	ENST00000477265.5	chr4:141733457	—	Interleukin	—	U; M
IL15RA	NM_002189.3	chr10:5952389	IL15R	Interleukin	—	U; M
IL17A	NM_002190.2	chr6:52190638	—	Interleukin	—	—
IL17F	NM_052872.3	chr6:52236686	—	Interleukin	—	U
IL18	NM_001562.3	chr11:112143262	—	Interleukin	—	U; M
IL18R1	NM_003855.3	chr2:102398774	—	Interleukin	—	U; M
IL18RAP	NM_003853.3	chr2:102452560	—	Interleukin	—	U; M
IL1B	NM_000576.2	chr2:112829760	—	Interleukin	Monocyte	U; M
IL1R2	NM_004633.3	chr2:102028413	—	Interleukin	—	U; M
IL1RL1	NM_003856.3	chr2:102344719	—	Interleukin	—	U; M

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IL1RN	NM_000577.4	chr2:113134014	—	Interleukin	Monocyte	U; M
IL2	NM_000586.3	chr4:122451470	—	Interleukin	—	U; M
IL21	NM_021803.3	chr4:122612628	—	Interleukin	—	—
IL22	NM_020525.4	chr12:68248245	—	Interleukin	—	—
IL23R	NM_144701.2	chr1:67259979	—	Interleukin	—	U; M
IL25	NM_022789.3	chr14:23376403	IL17E	Interleukin	—	U
IL2RA	NM_000417.2	chr10:6010694	CD25	Interleukin	—	M
IL2RB	NM_000878.3	chr22:37125929	—	Interleukin	Cytotoxic T; NK	U; M
IL3	NM_000588.3	chr5:132063203	—	Interleukin	—	—
IL31	NM_001014336.1	chr12:122172030	—	Interleukin	—	U
IL32	NM_004221.4	chr16:3069528	—	Interleukin	—	U; M
IL33	NM_033439.3	chr9:6257856	—	Interleukin	—	U
IL3RA	NM_002183.3	chrX:1382689	CD123	Interleukin	—	U; M
IL4	NM_000589.3	chr5:132682678	—	Interleukin	—	U
IL4R	NM_000418.3	chr16:27364776	—	Interleukin	—	U; M
IL5	NM_000879.2	chr5:132541445	—	Interleukin	—	—
IL6	NM_000600.4	chr7:22731997	—	Interleukin	—	U; M
IL7R	NM_002185.3	chr5:35879599	CD127	Interleukin	—	U; M
IL9	NM_000590.1	chr5:135892246	—	Interleukin	—	—
IRF4	NM_002460.3	chr6:411439	—	Transcription factor	—	U; M
IRF8	NM_002163.2	chr16:85922602	—	Transcription factor	—	U; M
ITGA4	NM_000885.5	chr2:181537748	VLA-4; CD49d	Integrin	—	U; M
ITGAE	NM_002208.4	chr17:3714684	—	Integrin	—	U; M
ITGAM	NM_000632.3	chr16:31332867	CD11b	Integrin	—	U; M
ITGAX	NM_000887.4	chr16:31382866	CD11c	Integrin	Monocyte	U; M
ITGB2	NM_000211.4	chr21:44886059	—	Integrin	Monocyte; NK; T	U; M
JCHAIN	NM_144646.3	chr4:70655541	—	Immunoglobulin	—	U; M
JUN	NM_002228.3	chr1:58780888	—	Stress response	—	U; M
JUNB	NM_002229.2	chr19:12793237	—	Stress response	—	U; M
KCNE3	NM_005472.4	chr11:74455113	—	Miscellaneous	Monocyte	U; M
KDELR1	NM_006801.2	chr19:48382579	—	Miscellaneous	—	U; M
KIAA0101	NM_014736.5	chr15:64366011	—	Cell cycle (S phase)	—	U; M
KIR2DL1	NM_014218.2	chr19:54784326	—	NK cell receptor	NK	U; M
KIT	NM_000222.2	chr4:54740712	c-kit; CD117	CD marker	—	U; M
KLRB1	NM_002258.2	chr12:9595274	—	NK cell receptor	NK	U; M
KLRC1	NM_002259.4	chr12:10446028	NKG2A	NK cell receptor	NK	U; M
KLRC3	NM_002261.2	chr12:10412316	NKG2E	NK cell receptor	NK	U; M
KLRC4	NM_013431.2	chr12:10407384	—	NK cell receptor	NK	U; M
KLRF1	NM_016523.2	chr12:9844752	NKp80	NK cell receptor	NK; T subset	U; M
KLRG1	NM_005810.3	chr12:9010748	—	NK cell receptor	NK	U; M

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KLRK1	NM_007360.3	chr12:10372355	NKG2D	NK cell receptor	NK; T subset	U; M
LAG3	NM_002286.5	chr12:6778452	—	Cell type marker	Exhausted T	U; M
LAIR2	NM_002288.5	chr19:54510684	—	Miscellaneous	—	U; M
LAMP1	NM_005561.3	chr13:113323243	CD107a	CD marker	—	U; M
LAMP3	NM_014398.3	chr3:183122217	—	Cell type marker	Dendritic	U; M
LAP3	NM_015907.2	chr4:17607967	—	Enzyme	T subset	U; M
LAT	NM_014387.3	chr16:28990782	—	Miscellaneous	T subset	U; M
LAT2	NM_014146.3	chr7:74229827	—	Miscellaneous	—	U; M
LCK	NM_005356.4	chr1:32286163	—	Cell type marker	T subset	U; M
LEF1	NM_016269.4	chr4:108047550	—	Cell type marker	T subset	U; M
LGALS1	NM_002305.3	chr22:37679799	—	Cell adhesion	NK (high in cytokine producing); upregulated in activated NK; low in regulatory T	U; M
LGALS3	NM_002306.3	chr14:55145306	—	Cell adhesion	Monocyte; regulatory T	U; M
LGALS9	NM_002308.3	chr17:27649553	—	Cell adhesion	T subset; monocyte	U; M
LIF	NM_002309.4	chr22:30240453	—	Cytokine	—	U; M
LILRB4	NM_001278426.3	chr19:54668223	—	Immune receptor	Monocyte	U; M
LIPA	NM_000235.3	chr10:89213576	—	Enzyme	—	U; M
LRRC32	NM_005512.2	chr11:76657526	GARP	Miscellaneous	—	U; M
LTA	NM_000595.3	chr6:31574320	TNFBeta	Cytokine	—	U; M
LTB	NM_002341.1	chr6:31580639	—	Cytokine	—	U; M
LY86	NM_004271.3	chr6:6654980	—	Miscellaneous	B; monocyte	U; M
LYN	NM_002350.3	chr8:56011334	—	Miscellaneous	B	U; M
MCM2	NM_004526.3	chr3:127622431	—	Cell cycle (S phase)	—	U; M
MCM4	NM_005914.3	chr8:47976921	—	Cell cycle (S phase)	—	U; M
MGST1	NM_020300.4	chr12:16364233	—	Miscellaneous	—	U; M
MITF	NM_000248.3	chr3:69968162	—	Transcription factor	—	U; M
MKI67	NM_002417.4	chr10:128098610	Ki67	Proliferation marker	—	U; M
MME	NM_000902.3	chr3:155183729	CD10	CD marker	Granulocyte	U; M
MMP12	NM_002426.5	chr11:102862925	—	Miscellaneous	—	U
MMP9	NM_004994.2	chr20:46016552	—	Miscellaneous	Granulocyte	U; M
MS4A1	NM_021950.3	chr11:60470055	CD20	Cell type marker	B	U; M
MYC	NM_002467.4	chr8:127741273	—	Proliferation marker	—	U; M
MZB1	NM_016459.3	chr5:139387570	—	Cell type marker	Plasma	U; M
NAMPT	NM_005746.2	chr7:106250045	—	Cytokine	—	U; M
NCAM1	NM_000615.6	chr11:113278422	CD56	CD marker	NK	U; M

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NCR3	NM_147130.2	chr6:31588904	NKp30; CD337	CD marker	NK	U; M
NINJ2	NM_016533.5	chr12:564298	—	Miscellaneous	T subset	U; M
NKG7	NM_005601.3	chr19:51371623	—	Cell type marker	T subset; NK	U; M
NRP1	NM_003873.5	chr10:33177756	BDCA-4; CD304	CD marker	—	U; M
NT5E	NM_002526.3	chr6:85495791	CD73	CD marker	—	U; M
PASK	NM_015148.3	chr2:241106298	—	Kinase	T subset	U; M
PAX5	NM_016734.2	chr9:36833277	—	Transcription factor	B subset	U; M
PCNA	NM_002592.2	chr20:5115093	—	Cell cycle (S phase)	—	U; M
PDCD1	NM_005018.2	chr2:241849887	PD-1	Immune checkpoint	T subset	U; M
PDIA4	NM_004911.4	chr7:149003615	—	Enzyme	—	U; M
PDIA6	NM_005742.3	chr2:10783683	—	Miscellaneous	—	U; M
PI3	NM_002638.3	chr20:45176542	—	Cell type marker	Granulocyte	U
PIK3AP1	NM_152309.2	chr10:96593432	BCAP	Miscellaneous	—	U; M
PIK3IP1	NM_052880.4	chr22:31281684	HGFL	Miscellaneous	T subset	U; M
PMCH	NM_002674.3	chr12:102196459	—	Miscellaneous	T subset	M
POU2AF1	NM_006235.2	chr11:111352260	—	Transcription factor	B; plasma	U; M
PRDM1	NM_001198.3	chr6:106107903	Blimp-1	Transcription factor	Plasma	U; M
PRDM1	NM_001198.3	chr6:106109933	Blimp-1	Transcription factor	Plasma	U; M
PRF1	NM_005041.4	chr10:70597350	—	Effector molecule	T subset	U; M
PSEN1	NM_000021.3	chr14:73223689	—	Enzyme	—	U; M
PTGDR2	NM_004778.2	chr11:60850935	CRTH2	Immune receptor	—	U; M
PTPRC	NM_002838.4	chr1:198756421	CD45	CD marker	—	U; M
PTTG2	NM_006607.2	chr4:37961010	—	Miscellaneous	—	U; M
QPCT	NM_012413.3	chr2:37373320	—	Enzyme	—	U; M
RGS1	NM_002922.3	chr1:192579765	—	Miscellaneous	—	U; M
RNASE2	NM_002934.2	chr14:20956435	EDN	Enzyme	Monocyte	U; M
RNASE6	NM_005615.4	chr14:20782459	—	Enzyme	Monocyte	U; M
RORA	NM_002943.3	chr15:60488351	—	Nuclear receptor	T subset	U; M
RORC	NM_005060.3	chr1:151806109	—	Nuclear receptor	T subset	U; M
RPN2	NM_002951.4	chr20:37241432	—	Miscellaneous	—	U; M
RUNX3	NM_004350.2	chr1:24899758	—	Transcription factor	T subset	U; M
S100A10	NM_002966.2	chr1:151983017	—	Miscellaneous	Monocyte; T subset (regulatory T)	U; M
S100A12	NM_005621.1	chr1:153373716	—	Miscellaneous	Monocyte	U; M
S100A9	NM_002965.3	chr1:153361020	—	Cell type marker	Monocyte	U; M
SELL	NM_000655.4	chr1:169690670	—	Cell type marker	T subset	U; M
SELPLG	NM_003006.4	chr12:108622282	CD162	CD marker	—	U; M
SLC25A37	NM_016612.3	chr8:23572278	—	Transporter	—	U; M
SLC7A7	NR_040448.1	chr14:22773437	—	Transporter	—	U; M
SNCA	NM_000345.3	chr4:89726344	—	Miscellaneous	—	U; M

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SPP1	NM_000582.2	chr4:87983244	—	Cytokine	—	U; M
STAT1	NM_007315.3	chr2:190969036	—	Transcription factor	—	U; M
STAT3	NM_003150.3	chr17:42313463	—	Transcription factor	—	U; M
STAT4	NM_003151.3	chr2:191029580	—	Transcription factor	—	U; M
STAT5A	NM_003152.3	chr17:42311938	—	Transcription factor	—	U; M
STAT6	NM_003153.4	chr12:57095986	—	Transcription factor	—	U; M
TARP_refseq	NM_001003799.1	chr7:38259643	TRGC	—	—	U; M
TBX21	NM_013351.1	chr17:47746119	T-bet	Transcription factor	T subset	U; M
TCF4	NM_003199.2	chr18:55223457	—	Transcription factor	—	U; M
TCF7	NM_003202.3	chr5:134148043	—	Transcription factor	—	U; M
TCL1A	NM_021966.2	chr14:95710059	—	Cell type marker	B	U; M
TGFB1	NM_000660.5	chr19:41330531	—	Growth factor	—	U; M
TGFB3	NM_003239.3	chr14:75958157	—	Growth factor	—	U; M
TGFB1	NM_000358.2	chr5:136063533	—	Cell adhesion	—	U; M
THBD	NM_000361.2	chr20:23045635	CD141	CD marker	—	U; M
THBS1	NM_003246.3	chr15:39597464	—	Cell adhesion	—	U; M
TIAF1	NM_004740.3	chr17:29073522	—	Miscellaneous	—	U; M
TIGIT	ENST00000481065.5	chr3:114308282	—	Immune receptor	T; NK	M
TLR2	NM_003264.4	chr4:153705403	CD282	Toll like receptor	Monocyte	U; M
TLR7	NM_016562.3	chrX:12890096	CD287	Toll like receptor	—	U; M
TLR8	NM_016610.3	chrX:12923165	CD288	Toll like receptor	—	U; M
TLR9	NM_017442.3	chr3:52221083	—	Toll like receptor	—	U; M
TMEM97	NM_014573.2	chr17:28328223	—	Miscellaneous	—	U; M
TNF	NM_000594.3	chr6:31578328	TNFalpha	Cytokine	—	U; M
TNFRSF13C	NM_052945.3	chr22:41925015	BAFFR	Cytokine receptor	—	U; M
TNFRSF17	NM_001192.2	chr16:11968067	BCMA	Cytokine receptor	Plasma	U; M
TNFRSF25	NM_003790.2	chr1:6461161	DR3	Cytokine receptor	—	U; M
TNFRSF4	NM_003327.3	chr1:1211348	OX-40	Cytokine receptor	—	M
TNFRSF8	NM_001243.4	chr1:12144202	CD30	Cytokine receptor	—	U; M
TNFRSF9	ENST00000377507.7	chr1:7919847	CD137; 4-1BB	—	—	U; M
TNFSF10	NM_003810.3	chr3:172505681	TRAIL	Cytokine	—	U; M
TNFSF13	NM_003808.3	chr17:7561600	CD256; APRIL	Cytokine	Monocyte	U; M
TNFSF13B	NM_006573.4	chr13:108308346	BAFF	Cytokine	—	U; M
TNFSF14	NM_003807.4	chr19:6663138	LIGHT; CD258	Cytokine	—	U; M
TNFSF8	NM_001244.3	chr9:114901951	CD30L	Cytokine	—	U; M
TOP2A	NM_001067.3	chr17:40388528	—	Cell cycle (M phase)	—	U; M
TPSAB1	NM_003294.3	chr16:1242553	—	Cell type marker	Mast	U; M
TRAC	ENST00000611116.1	chr14:22552152	—	Cell type marker	Alpha beta T	U; M

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TRAT1	NM_016388.3	chr3:108854867	TCRIM	Immune receptor	T	U; M
TRBC2	ENST00000466254.1	chr7:142802743	—	Cell type marker	Alpha beta T	U; M
TRDC	ENST00000390477.2	chr14:22465788	—	Cell type marker	Gamma delta T	U; M
TREM1	NM_018643.4	chr6:41276003	CD354	CD marker	Neutrophil; monocyte	U; M
TRIB2	NM_021643.3	chr2:12742729	—	Kinase	T	U; M
TSPAN32	NM_139022.2	chr11:2318139	—	Miscellaneous	—	U; M
TXK	NM_003328.2	chr4:48066514	—	Cell cycle (M phase)	—	U; M
TYMS	NM_001071.2	chr18:673197	—	Cell cycle (S phase)	—	U; M
UBE2C	NM_007019.3	chr20:45816953	—	Cell cycle (M phase)	—	U; M
VEGFA	NM_003376.5	chr6:43786255	—	Growth factor	—	U; M
VMO1	NM_182566.2	chr17:4785287	—	Miscellaneous	—	U; M
VNN2	NM_004665.4	chr6:132744043	—	Miscellaneous	Monocyte; T subset	U; M
VPREB3	NM_013378.2	chr22:23752747	—	Immunoglobulin	B	U; M
VPS28	NM_016208.3	chr8:144423623	—	Miscellaneous	B	U; M
VSIG4	NM_007268.2	chrX:66021741	—	Miscellaneous	—	M
XBP1	NM_005080.3	chr22:28794834	—	Transcription factor	—	U; M
YBX3	NM_003651.4	chr12:10699316	—	Transcription factor	Monocyte; granulocyte	U; M
ZAP70	NM_001079.3	chr2:97739859	—	Immune receptor; kinase	T; NK	U; M
ZBED2	NM_024508.4	chr3:111592902	—	Transcription factor	Activated T	—
ZBTB16	NM_006006.4	chr11:114250673	—	Transcription factor	—	U; M
ZNF683	NM_173574.3	chr1:26361636	—	Transcription factor	Effector memory/ effector T	M

Handling

Store the reagents at the specified storage temperature. Before using reagents, see the *BD Rhapsody™ Single-Cell Analysis System User Guide* (Doc ID: 47395).

Safety

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