



Welcome to More Choice

CD Marker Handbook

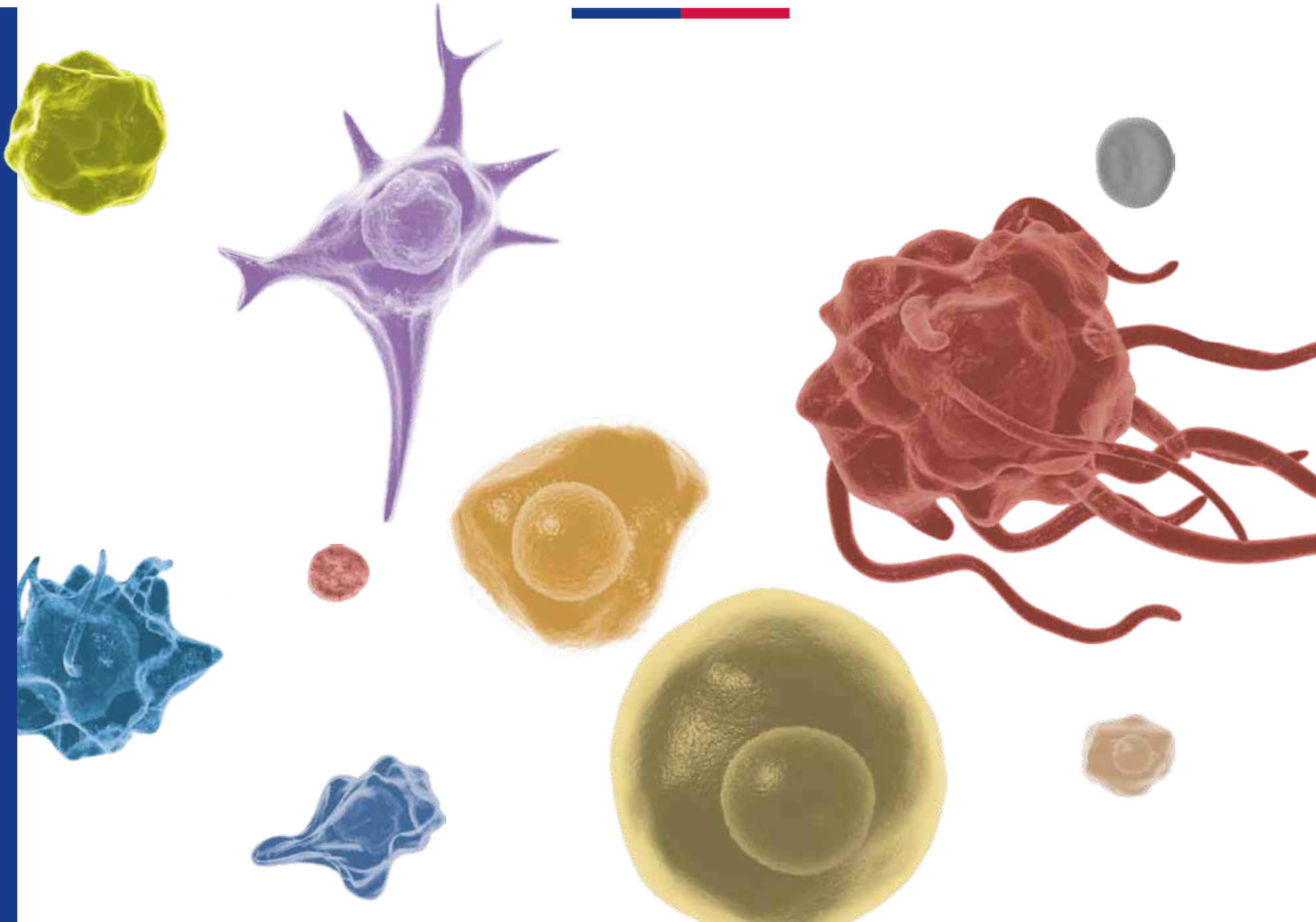
Human  
Mouse

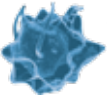










For more information, please visit:

[bdbiosciences.com/eu/go/humancdmarkers](http://bdbiosciences.com/eu/go/humancdmarkers)

[bdbiosciences.com/eu/go/mousecdmarkers](http://bdbiosciences.com/eu/go/mousecdmarkers)

Human and Mouse CD Marker Handbook



		Key Markers - Human	Key Markers - Mouse
<b>T Cell</b>		CD3 CD4 CD8	CD3 CD4 CD8
<b>B Cell</b>		CD19 CD20	CD45R/B220 CD19 CD22 (B cell activation marker)
<b>Dendritic Cell</b>		CD11c CD123	CD11c CD123
<b>NK Cell</b>		CD56	CD335 (NKp46)
<b>Stem Cell/ Precursor</b>		CD34 <i>hematopoietic stem cell only</i>	CD34 <i>hematopoietic stem cell only</i>
<b>Macrophage/ Monocyte</b>		CD14 CD33	CD11b/ Mac-1 Ly-71 (F4/80)
<b>Granulocyte</b>		CD66b	CD66b Gr-1/Ly6G Ly6C
<b>Platelet</b>		CD41 CD61 CD62	CD41 CD61 (Integrin $\beta$ 3) CD9 CD62P (activated platelets)
<b>Erythrocyte</b>		CD235a	CD235a Ter-119
<b>Endothelial Cell</b>		CD146	CD146 MECA-32 CD106 CD31 CD62E (activated endothelial cells)
<b>Epithelial Cell</b>		CD236	CD326 (EPCAM1)

CD (cluster of differentiation) molecules are cell surface markers useful for the identification and characterization of leukocytes. The CD nomenclature was developed and is maintained through the HLDA (Human Leukocyte Differentiation Antigens) workshop started in 1982. The goal is to provide standardization of monoclonal antibodies to human antigens across laboratories. To characterize or “workshop” the antibodies, multiple laboratories carry out blind analyses of antibodies. These results independently validate antibody specificity.

While the CD nomenclature has been developed for use with human antigens, it is applied to corresponding mouse antigens as well as antigens from other species. However, the mouse and other species antibodies are not tested by HLDA.

Human CD markers were reviewed by the HLDA. New CD markers were established at the HLDA9 meeting held in Barcelona in 2010. For additional information and CD markers please visit [www.hcdm.org](http://www.hcdm.org).



CD	Alternative Name	Ligands & Associated Molecules	T Cell	B Cell	Dendritic Cell	NK Cell	Stem Cell/Precursor	Macrophage/Monocyte	Granulocyte	Platelet	Erythrocyte	Endothelial Cell	Epithelial Cell	Function
<b>CD1a</b>	R4, T6	β-2-Microglobulin, CD74	+	+	+	-		+	-	-	-			Antigen presenting protein
<b>CD1b</b>	R1, T6	β-2-Microglobulin	+	+	+	-		+	-	-	-			Antigen presenting protein
<b>CD1c</b>	M241, R7, T6	β-2-Microglobulin	+	+	+	-		+	-	-	-			Antigen presenting protein
<b>CD1d</b>	R3G1	β-2-Microglobulin, MHC II	+	+	+	-			-	-	-		+	Antigen presenting protein
<b>CD1e</b>	cR2	β-2-Microglobulin			+	-			-	-	-			Antigen presentation of glycolipids
<b>CD2</b>	E-rosette R, Erythrocyte R, T11, LFA-2	CD58, CD48, CD59, CD15, LFA-3	+	+		+			-	-	-			Cell adhesion between T cells and other cell types
<b>CD3</b>	T3	TCR	+	-		-	-	-	-	-	-	-	-	A complex of subunits that mediates T cell signal transduction
<b>CD3d</b>	δ Polypeptide (TiT3 complex)	TCR	+											Part of the CD3/TCR complex that mediates T-cell receptor signal transduction
<b>CD3e</b>	T3e	TCR	+											Part of the CD3/TCR complex that mediates T-cell receptor signal transduction
<b>CD3g</b>	T3G	TCR	+											Part of the CD3/TCR complex that mediates T-cell receptor signal transduction
<b>CD4</b>	L3T4, W3/25, T4	MHC Class II, gp120, IL-16, Lck	+	-		-	-	+	+	-	-	-	-	Initiates or augments the early phase of T-cell activation.
<b>CD5</b>	T1, Tp67, Leu-1, Ly-1	CD72, BCR, gp35-37, ZAP-70, TCR, CD21	+	+		-		-	-	-	-			Acts as a negative regulator of T-cell receptor signaling
<b>CD6</b>	T12, TP120	gp40, gp90, CD166 (ALCAM)	+	+				-	-	-	-			Involved in T-cell activation and cell adhesion
<b>CD7</b>	gp40, TP41	PI3-Kinase	+	-		+	+	-	-	-	-			Important for T-cell interactions
<b>CD8a</b>	Leu2, T8, Lyt2,3	MHCI, Lck	+	-		+	-	-	-	-	-	-	-	May play an important role in T-cell mediated killing
<b>CD8b</b>	CD8, Leu2, Lyt3	MHCI, Lck	+	-		-	-	-	-	-	-	-	-	May play an important role in T-cell mediated killing
<b>CD9</b>	p24, DRAP-1, MRP-1	CD63, CD81, CD82, CD41/CD61, HLA-DR, Integrin β1, PI4-Kinase	+	+			-	+	+	+		+	+	Involved in platelet activation and aggregation, cell adhesion and cell motility
<b>CD10</b>	CALLA, NEP, gp100, EC 3.4.24.11, MME		-		-	+	-	-	-	-		+		Neutral endopeptidase that cleaves peptides and inactivates several peptide hormones.
<b>CD11a</b>	LFA-1α, Integrin αL	ICAM-1, 2, 3, 4, CD18	+	+		+		+	+		-	-		Involved in leukocyte-endothelial cell interactions and T-cell mediated killing.
<b>CD11b</b>	Integrin αM, CR3, Mo1, C3niR, Mac-1	iC3b, Fibrinogen, ICAM-1, 2, Factor X	+	+	+	+		+	+		-	-		Implicated in the various adhesive interactions of monocytes, macrophages, and granulocytes.
<b>CD11c</b>	Integrin αX, p150,95, AXb2, CR4	iC3b, Fibrinogen, ICAM-1, 4	+	+	+	+		+	+		-	-		Important for cell-cell interaction during inflammatory responses.



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<b>CD11d</b>	Integrin $\alpha$ D, ITGAD, ADB2	ICAM3, VCAM1						+						May play an important role in atherosclerotic processes such as clearing of lipoproteins.
<b>CDw12</b>	p90-120		-	-	+	+	+	+	-	-				Unknown
<b>CD13</b>	ANPEP, Aminopeptidase N, AAP, APM, LAP1, P150, PEPN, APN, gp150, EC 3.4.11.2	NGR, HNF1A, DNAK, NAALADL1, MEP1B, VCP, Corona virus Receptor	+	-	-	+	+	+	-	-	+	+		Aminopeptidase
<b>CD14</b>	LPS-Receptor	Endotoxin, Lipopolysaccharide (LPS), TLR4, LBP, LY96, TLR2	-	-	-		+	+						Mediates the innate immune response to bacterial lipopolysaccharide (LPS).
<b>CD15</b>	X-Hapten, Lewis X, SSEA-1, 3-FAL, FUT4	Selectins	-	-	-	+	+	+	-	-	-			Adhesion, granulocyte activation
<b>CD16</b>	FCRIIIA, CD16a	IgG Fc	+	-	+	+		+	+	-	-			Low affinity FcR, antibody binding (IgG1 and 3) and immune response modulation, mediates phagocytosis and antibody-dependent T-cell-mediated cytotoxicity
<b>CD16b</b>	FCRIIB	IgG Fc						+	-	-				Neutrophil transendothelial migration, immune response activation
<b>CD17</b>	Lactosylceramide, LacCer		+	+	+	-		+	+	+	-	+	+	May mediate homotypic adhesion and binds to bacteria and may function in phagocytosis, motility, proliferation, trapping and adhesion.
<b>CD18</b>	Integrin $\beta$ 2, CD11a, b, c $\beta$ -subunit	CD11a, b, c	+	+	+	+		+	+	+	-	-		Adhesion, cell signaling
<b>CD19</b>	B4	CD21, CD81, CD225, Leu-13, Lyn, Fyn, Vav, PI3-kinase	-	+	+	-	+	-	-	-	-	-	-	Assembles with the antigen receptor of B lymphocytes to decrease the threshold for antigen receptor-dependent stimulation.
<b>CD20</b>	B1, Bp35	Lyn, LCK, Fyn, Cell surface protein: 28-30,180-200,50-60 kDa	+	+	-	-	-	-	-	-	-	-	-	Development and differentiation of B cells into plasma cells.
<b>CD21</b>	CR2, EBV-R, C3dR	C3d, CD23, CD19, CD81, Leu13	+	+	+	-	+	-	-	-	-	-	+	Regulator of complement activation
<b>CD22</b>	BL-CAM, Siglec-2	p72sky, p53/56lyn, SHP1, PI3-kinase, CD45, PLC $\gamma$ 1	-	+	-	-	+	-	-	-	-	-	-	Mediates B-cell B-cell interactions. May be involved in the localization of B cells in lymphoid tissues. Modulates B-cell signaling.
<b>CD23</b>	Fc $\epsilon$ RII, B6, BLAST-2, Leu-20	IgE, CD21, CD11b, CD11c	+	+	+	-		+	+	+	-	-	+	Key molecule for B-cell activation and growth. This receptor has essential roles in the regulation of IgE production and in the differentiation of B cells.
<b>CD24</b>	BBA-1, HSA	CD62P (P-Selectin)	-	+	-	-	-	-	+	-	-	-	+	Regulation of B-cell proliferation and maturation. Regulates binding capacity of CD49d/CD29.
<b>CD25</b>	Tac antigen, IL-2R $\alpha$ , p55, TCGFR	IL-2	+	+	-	+	-	+	-	-	-	-	-	Receptor for interleukin-2
<b>CD26</b>	DPP IV ectoenzyme, ADA binding protein, ADCP2, TP103	Adenosine deaminase, Collagen, CD45	+	+	-	+	-	+	-	-	-	-	+	Exopeptidase
<b>CD27</b>	T14, S152, TP55, TNFRSF7	CD70, TRAF5, TRAF2	+	+	-	+	-	-	-	-	-	-	-	Generation and long term maintenance of T-cell immunity

+ Positive\* - Negative

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<b>CD28</b>	Tp44, T44	CD80, CD86, PI3-kinase	+	-	-	-	-	-	-	-	-	-	-	T-cell proliferation, survival, IL-2 production, and Th2 cell development
<b>CD29</b>	Platelet GPIIa, Integrin $\beta$ 1, GP	VCAM-1, MAdCAM-1	+	+	+	+	+	+	+	+		+	+	Cell adhesion
<b>CD30</b>	Ber-H2, Ki-1	CD153, TRAF1, 2, 3, 5	+	+		+	+	+	-	-	-	+	-	Activation of NF- $\kappa$ B, apoptosis, autoimmunity
<b>CD31</b>	PECAM-1, endoCAM, Platelet endothelial cell adhesion molecule, PECA1	CD38, Glycosaminoglycans (GAGs), Integrin $\alpha$ v $\beta$ 3	+	+		+		+	+	+	-	+		Cell adhesion, activation, and migration
<b>CD32a</b>	FC $\gamma$ RII, Fc- $\gamma$ receptor 2, FCGR2A, Low affinity immunoglobulin $\gamma$ Fc receptor II	IgG	-	+		-		+	+	+	-	-		Innate and adaptive immune responses
<b>CD32b</b>	FCG2, FCGR2B, IGFR2	IgG, INPP5D/SHIP1	+	+		-		+	+	+	-	+		Phagocytosis of immune complexes and regulation of antibody production.
<b>CD32c</b>	FCG2, FCGR2C, IGFR2	IgG				+		+	+					Low affinity receptor for Fc involved in a variety of effector and regulatory functions
<b>CD33</b>	gp67, SIGLEC-3, Sialic acid-binding Ig-like lectin 3, Myeloid cell surface antigen CD33	Sugar chains containing sialic acid, $\alpha$ -2,6-linked Sialic acid	-	-	+	-	+	+	+	-	-	-	-	Cell adhesion, cell-cell signaling, inhibitory receptor, and apoptosis
<b>CD34</b>	gp105-120, Hematopoietic progenitor cell antigen 1 (HPCA1)	L-Selectin, MadCAM-1, CRKL	-	-	-	-	+	-	-	-	-	+		Cell adhesion
<b>CD35</b>	CR1, C3b/C4b receptor, Complement receptor 1, Immune Adherence receptor	C3b, C4b, iC3, iC4	+	+	+	-		+	+	-	+			Complements cascade regulation; mediates cellular binding of particles and immune complexes that have activated complement
<b>CD36</b>	Platelet glycoprotein 4, Glycoprotein IIIb (GpIIIb), Glycoprotein IV (GPiV), PASiV, Fatty acid translocase (FAT), SCARB3, GP88	Thrombospondin, Collagen I, IV, V, Long-chain fatty acids	-	-	+	-	+	+	-	+	+	+	-	Cell adhesion, cholesterol transport, scavenger receptor
<b>CD37</b>	gp52-40, Leukocyte antigen CD37, Tetraspanin-26, TSPAN26	CD53, CD81, CD82, MHC II	+	+		-		+	+	-	-			Regulation of T-cell-B-cell interactions, development, activation, growth and motility.
<b>CD38</b>	ADP-ribosyl cyclase, T10, Cyclic ADP-ribose hydrolase 1	CD31, Hyaluronic acid, CD3/TcR complex, CD16, HLA Class II	+	+	+	+	+	+	-					Cell adhesion and signal transduction
<b>CD39</b>	Ectonucleoside triphosphate diphosphohydrolase 1 (ENTPD1), ATPdehydrogenase, NTPdehydrogenase-1	ADP/ATP	+	+	+	+		+		-		+	+	ADP and ATP hydrolysis, neurotransmission regulation
<b>CD40</b>	Bp50, MGC9013, TNFRSF5, Tumor necrosis factor receptor superfamily member 5	CD154, CD40L, TRAP	-	+	+	-	+	+	-		-	+	+	Cell adhesion, cell proliferation, and signal transduction
<b>CD41</b>	GPIIb, Integrin $\alpha$ IIb, Platelet membrane glycoprotein IIb, ITGA2B, Integrin $\alpha$ 2b, Human Platelet Antigen-3 (HPA-3)	Fibrinogen, Fibronectin, von Willebrand factor (vWF)	-	-	-	-	+	-	-	+	-	-	-	Cell adhesion, platelet aggregation

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<b>CD42a</b>	GPIIb, GPIIb/IIIa, Platelet glycoprotein IIb/IIIa	von Willebrand factor (vWF), Thrombin, CD42b,c,d	-	-	-	-	+	-	-	+	-	-	-	Platelet adhesion
<b>CD42b</b>	GPIIb $\alpha$ , Platelet glycoprotein IIb $\alpha$	von Willebrand factor (vWF), Thrombin, CD42a, c, d	-	-	-	-	+	-	-	+	-	-	-	Platelet adhesion
<b>CD42c</b>	GPIIb $\beta$ , Platelet glycoprotein IIb $\beta$	von Willebrand factor (vWF), Thrombin, CD42a, b, d	-	-	-	-	+	-	-	+	-	-	-	Platelet adhesion
<b>CD42d</b>	GPV, Platelet glycoprotein V	von Willebrand factor (vWF), Thrombin, CD42a, b, c	-	-	-	-	+	-	-	+	-	-	-	Platelet adhesion
<b>CD43</b>	Sialophorin, Leukosialin, Galactoglycoprotein, SPN	Hyaluronan, EZR, Moesin	+	-	-	+	+	+	+	+	-	-	-	Cell adhesion and T cell activation
<b>CD44</b>	ECM $\beta$ 1, H-CAM, Pgp-1, Phagocytic glycoprotein I, Extracellular matrix receptor III, GP90 Lymphocyte homing/adhesion receptor, Hyaluronate receptor	Hyaluronan, Ankyrin, Fibronectin, MIP1 $\beta$ , Osteopontin, Collagen, Matrix metalloproteinases (MMPs)	+	+	-	+	-	+	+	-	+	+	+	Cell adhesion and migration
<b>CD45</b>	Leukocyte Common Antigen (LCA), T200, B220, Ly5, Protein tyrosine phosphatase receptor type C (PTPRC)	p56lck, p59fyn, Src kinases	+	+	+	+	+	+	+	-	-	-	-	Regulator of T- and B-cell antigen receptor signaling; regulator of cell growth and differentiation
<b>CD45RA</b>	PTPRC	p56lck, p59fyn, Src kinases	+	+	+	+	+	+	-	-	-	-	-	CD45 isoform
<b>CD45RB</b>	PTPRC	p56lck, p59fyn, Src kinases	+	+	+	+	+	+	+	-	-	-	-	CD45 isoform
<b>CD45RC</b>	PTPRC	p56lck, p59fyn, Src kinases	+	+	+	+	+	+	-	-	-	-	-	CD45 isoform
<b>CD45RO</b>		p56lck, p59fyn, Src kinases	+	+	+	+	+	+	+	-	-	-	-	CD45 isoform
<b>CD46</b>	Membrane Cofactor Protein (MCP), Trophoblast leukocyte common antigen, TRA2.10	SCR2/3/4, Serum Factor 1 protease, CD9, CD29, CD151	+	+	-	+	-	+	+	+	-	+	+	Inhibitory complement receptor
<b>CD47</b>	gp42, IAP, Oa3, Neuropilin, MER6	SIRP, CD61, Thrombospondin	+	+	-	+	-	+	+	+	+	+	+	Cell adhesion and signal transduction
<b>CD48</b>	Blast-1, Hulym3, BCM-1, OX-45, MEM-102	CD2, lck, fyn, CD229, CD244	+	+	+	+	+	+	-	-	-	-	-	Lymphocyte adhesion and activation
<b>CD49a</b>	VLA-1 $\alpha$ , Integrin $\alpha$ 1	Collagen, Laminin	+	-	-	+	-	+	-	-	-	-	-	Cell adhesion
<b>CD49b</b>	VLA-2 $\alpha$ , Integrin $\alpha$ 2, gPIa	Collagen, Laminin, MMP-1	+	+	-	+	+	+	-	+	-	+	+	Cell adhesion
<b>CD49c</b>	VLA-3 $\alpha$ , Integrin $\alpha$ 3, GAPB3, Galactoprotein B3, MSK18, Very Common Antigen-2 (VCA-2)	Collagen, Laminin, CD9	+	+	-	-	+	-	-	-	-	+	+	Cell adhesion

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<b>CD49d</b>	VLA-4 $\alpha$ , Integrin $\alpha$ 4	CD106, MAdCAM, Fibronectin, Paxillin	+	+	+	+	+	+	-	-	-	+		Cell adhesion and lymphocyte homing
<b>CD49e</b>	VLA-5 $\alpha$ , Integrin $\alpha$ 5, Fibronectin receptor	Fibronectin, Invasin, Fibrinogen	+		+	+	+	+			+	+	+	Cell adhesion
<b>CD49f</b>	VLA-6 $\alpha$ , Integrin $\alpha$ 6, gpl	Laminin, Invasin	+				+	+		+		+	+	Cell adhesion
<b>CD50</b>	ICAM-3	LFA-1, Integrin $\alpha$ d/ $\beta$ 2	+	+		+	+	+	+	-	-	+	-	Cell adhesion
<b>CD51</b>	Integrin $\alpha$ v, VNR- $\alpha$ , Vitronectin-R $\alpha$	Fibrinogen, Vitronectin, MMP-2, vWF, TSP						+	-	+		+		Cell adhesion and signal transduction
<b>CD52</b>	CAMPATH-1, HE5, Epididymal secretory protein E52		+	+		+		+		-	-		+	Complement-mediated cell lysis and antibody-mediated cellular cytotoxicity
<b>CD53</b>	MOX44, TSPAN25, Tetraspanin-25	VLA-4, HLA-DR, Integrins	+	+	-	+	+	+	+	-	-		-	Cell adhesion, activation, and migration
<b>CD54</b>	ICAM-1	LFA-1, Mac-1, Rhinovirus	+	+				+				+		Cell adhesion, lymphocyte activation, and migration
<b>CD55</b>	Decay Accelerating Factor for Complement (DAF)	SCR, CD97, Echoviruses	+	+		+	+	+	+	+	+	+	+	Complement cascade (C3bBb complex) regulation
<b>CD56</b>	Leu-19, NKH-1, Neural Cell Adhesion Molecule (NCAM)	NCAM-1, Heparin sulfate	+			+								Cell adhesion and neural plasticity
<b>CD57</b>	HNK1, Leu-7, $\beta$ -1,3-glucuronyltransferase 1, Glucuronosyltransferase P, galactosylgalactosyl-xyloprotein 3- $\beta$ -glucuronosyltransferase 1	L-Selectin, P-Selectin, Laminin	+			+								Cell adhesion
<b>CD58</b>	LFA-3	CD2, LFA-2	+	+	+	+		+	+		+	+	+	Cell adhesion
<b>CD59</b>	1F5Ag, H19, Protectin, MACIF, MIRL, P-18	C8- $\alpha$ , C9, Ick, fyn	+			+		+	+		+			Complement cascade regulation
<b>CD60a</b>	GD3		+	+				+	+	+	-			Carbohydrate involved in co-stimulation
<b>CD61</b>	GP IIIa, Integrin $\beta$ 3	Fibrinogen, PTK2, ITGB3BP, TLN1 and CIB1						+		+		+		Cell adhesion
<b>CD62E</b>	E-Selectin, ELAM-1, LECAM-2	Sialyl Lewis x, a, CLA, CD162										+		Cell adhesion
<b>CD62L</b>	L-Selectin, LAM-1, LECAM-1, MEL-14, Leu8, TQ1	CD34, GlyCAM-1, MAdCAM-1	+	+		+		+	+					Cell adhesion
<b>CD62P</b>	P-Selectin, GMP-140, PADGEM	CD162, CD24								+		+		Cell adhesion
<b>CD63</b>	LIMP, MLA1, gp55, NGA, LAMP-3, ME491, OMA81H, TSPAN30, Granulophysin, Melanoma 1 antigen	VLA-3, VLA-6, CD81, CD9, PI4-kinase, CD117, CD82	+	+	-	+		+	+	+		+		Cell growth and motility regulation; complexes with integrins
<b>CD64a</b>	Fc $\gamma$ RI, Fc- $\gamma$ Receptor 1, High affinity immunoglobulin $\gamma$ Fc Receptor I, Fc $\gamma$ RIA	IgG	-	-	+	-	+	+	+	-	-	-	-	Innate and adaptive immune responses

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<b>CD65</b>	Ceramide-dodecasaccharide, VIM2, Fucoganglioside (Type II)	CD62E (E-Selectin)	-	-				+	+					Cell adhesion
<b>CD65s</b>	Sialylated poly-N-acetyllactosamine, Sialylated-CD65, VIM2	CD62E (E-Selectin)	-	-	-			+	+	-	-	-		Cell adhesion
<b>CD66a</b>	CD66, NCA-160, BGP (Biliary glycoprotein), BGP1, BGPI, CEACAM1	CD62E, CD66c, CD66e, Src kinases	-	-	-				+	-	-	-	+	Cell adhesion, cellular migration, pathogen binding and activation of signaling pathways
<b>CD66b</b>	CD67, CGM6, NCA-95, CEACAM8	CD66c, e, Src kinases	-	-	-				+	-	-	-		Cell adhesion, cellular migration, pathogen binding and activation of signaling pathways
<b>CD66c</b>	NCA, NCA-50/90, CEAL, CEACAM6	CD62E, Galectins, CD66a, b, c, e, Src kinases	-	-	-				+	-	-	-	+	Cell adhesion, cellular migration, pathogen binding and activation of signaling pathways
<b>CD66d</b>	CGM1, CEACAM3		-	-	-				+	-	-	-		Cell adhesion, cellular migration, pathogen binding and activation of signaling pathways
<b>CD66e</b>	CEA CEACAM5	CD66a, c, e	-	-	-					-	-	-	+	Cell adhesion, cellular migration, pathogen binding and activation of signaling pathways
<b>CD66f</b>	B1G1, CD66f, DHFRP2, FLJ90598, FLJ90654, PBG1, PSBG1, PSGGA, PSGIIA, SP1 SP-1, PSBG1, B1G1, PBG1, PSGGA		-	-	-					-	-	-	+	Cell adhesion, cellular migration, pathogen binding and activation of signaling pathways
<b>CD68</b>	gp110, Macrosialin, SCARD1	LDL	+	+	+		+	+	+	-	-			Macrophage homing
<b>CD69</b>	AIM, EA 1, MLR3, gp34/28, VEA, CLEC2C, BL-AP26		+	+		+		+	+	+				Lymphocyte proliferation; signal transmission in NK cells and platelets
<b>CD70</b>	TNFSF7, CD27LG, CD27L, Ki-24	CD27 ligand	+	+	-	-	-	-	-	-	-	-	-	Induces the proliferation of costimulated T cells and aids in the generation of cytolytic T cells.
<b>CD71</b>	TFRC, T9, Transferrin receptor, TFR, TRFR	Transferrin	-	-	-	-	+					-	+	Mediates the uptake of transferrin-iron complexes
<b>CD72</b>	Ly-19.2, Ly-32.2, Lyb2	CD5		+		-	+	+	-	-	-			B-cell proliferation and differentiation
<b>CD73</b>	Ecto-5'-nucleotidase, NT5E, E5NT, NT5, NTE, eN, eNT	AMP	+	+	+	-	+	-	-	-	-	+	+	An ecto-5-prime-nucleotidase hydrolyzing extracellular nucleotides into membrane permeable nucleosides
<b>CD74</b>	DHLA, HLADG, Ia-γ, li, invariant chain	HLA-DR, CD44	+	+	+			+				+	+	MHC class II antigen processing
<b>CD75</b>	ST6GAL1, MGC48859, SIAT1, ST6GALL, ST6N, ST6 β-Galactosamide α-2,6-sialyltransferase, Sialo-masked lactosamine, Carbohydrate of α2,6 sialyltransferase	CD22		+		-	-	+	-	-	+	-	-	Functional maturation of B lymphocytes

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<b>CD75S</b>	α2,6 Sialylated lactosamine	CD22 (proposed)	+	+	-	-	+	+	-	+	+	+	+	Cell differentiation and cell surface recognition
<b>CD77</b>	A14GALT (α1,4-Galactosyltransferase), A4GALT1, Gb3S, P(k), P1, PK A4GALT, Pk antigen, BLA, CTH/Gb3A4GALT1, Gb3S, P(k), P1, PK	Shiga toxin, Verotoxin 1, CD19	-	+	-	-	-	-	-	-	-	+	+	May play a role in apoptotic signaling
<b>CD79a</b>	IGA (Immunoglobulin-associated α), MB-1	Ig, CD5, CD19, CD22, CD79b	-	+	-	-	-	-	-	-	-	-	-	Required for initiation of B cell signal transduction upon binding of antigen to the B-cell antigen receptor complex
<b>CD79b</b>	IGB (Immunoglobulin-associated β), B29	Ig, CD5, CD19, CD22, CD79a	-	+	-	-	-	-	-	-	-	-	-	Required for initiation of B cell signal transduction upon binding of antigen to the B-cell antigen receptor complex
<b>CD80</b>	CD28LG, CD28LG1, LAB7, B7, B7-1, BB1	CD28, CD152 (CTLA-4)	+	+	+	-	-	+	-	-	-	-	-	Lymphocyte activation
<b>CD81</b>	TAPA1, S5.7	Leu-13, CD19, CD21	+	+	+	+	+	+	-	-	-	+	+	Cell adhesion
<b>CD82</b>	4F9, C33, IA4, KAI1, R2, ST6, SAR2, GR15	MHC-I, MHC-II, CD4, CD8, Integrin β1	+	+	+	+	+	+	+	+	-	+	+	TCR signaling
<b>CD83</b>	HB15, BL11		-	+	+	-	-	-	-	-	-	-	-	Antigen presentation and immune stimulation
<b>CD84</b>	LY9B, SLAMF5, p75, GR6, hly9-β	CD84	+	+	+	+	-	+	-	+	-	-	-	Cell adhesion
<b>CD85A</b>	ILT5, LIR3, HL9, LILRB3 (Leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 3, LIR-3, MGC138403, PIRB, XXbac-BCX105G6.7	HLA class I	+	-	+	-	+	+	+	-	-	-	-	Immune regulation
<b>CD85C</b>	LILRB5 (Leukocyte immunoglobulin-like receptor, subfamily B)(with TM and ITIM domains), member 5, LIR8					+		+						Immune regulation
<b>CD85D*</b>	LILRB2 (Leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 2, LILRB2, ILT4, LIR2, MIR10, MIR-10	HLA class I	-	-	+	-	-	+	+	-	-	-	-	Down-regulation of immune response
<b>CD85E</b>	LILRA3 (Leukocyte immunoglobulin-like receptor, subfamily A (without TM domain), member 3, HM31, HM43, ILT6, LIR-4, LIR4,e3			+	+	+		+						
<b>CD85F</b>	XXbac-BCX403H19.2, CD85, CD85F,LIR9, ILT11, LILRB7 (Leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 7							+						May be involved in triggering innate immune responses

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<b>CD85G</b>	LILRA4 (Leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 4, ILT7, MGC129597, MGC129598)				+			+	+					Activation of eosinophils
<b>CD85H</b>	LILRA2 (Leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 2, ILT1, LIR7, LIR-7, XXbac-BCX85G21.2, ILT-1)													
<b>CD85I</b>	LILRA1 (Leukocyte immunoglobulin-like receptor), subfamily A (with TM domain), member 1, LIR-6, LIR6, MGC126563			+				+						
<b>CD85J*</b>	LILRB1 (Leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 1, FLJ37515, ILT2, LIR-1, LIR1, MIR-7, MIR7)	HLA class I	+	+	+	+	-	+		-	-	-	-	Inhibits cytotoxicity in NK and T cells upon ligand binding
<b>CD85K*</b>	LILRB4 (Leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 4, ILT3, LIR-5, HM18, LIR5, LILRB5)	HLA class I	-	-	+	-	+	+	+	-	-	-	-	Down regulation of the immune response
<b>CD86</b>	B7-2/B70, CD28LG2, LAB72, MGC34413	CD28, CD152 (CTLA-4)	+	+	+	-	-	+	-	-	-	+	-	Upon binding of CD28 serves as a costimulatory signal for T-cell activation. Binding of CD86 to CD152 (CTLA-4) negatively regulates T-cell activation.
<b>CD87</b>	Upar, PLAUR, URKR	uPA, Pro-UPA, Vitronectin	+	-		+	-	+	+	-	-	+	-	Receptor for urokinase plasminogen activator
<b>CD88</b>	C5R1, C5aR, C5AR, C5A	C5a/C5a(desArg), Anaphylatoxin	-	-	+	-	-	+	+	-	-	+	+	Receptor for anaphylatoxin C5a which stimulates chemotaxis, granule enzyme release and superoxide anion production.
<b>CD89</b>	FCAR	IgA1, IgA2	-	-		-		+	+	-	-	-	-	Receptor for the Fc region of IgA which mediates several immune functions including cytokine production
<b>CD90</b>	Thy-1	CD45, Ick, fyn, P100	-	-		-	+	-	-	-	-	+	-	Cell adhesion
<b>CD91</b>	LRP1, α2M-R, α2MR, APOER, APR, LRP	RAP, α2M, apoE, Lactoferrin, LDLs	-	-		-		+	-	-	-	-	+	Endocytic receptor involved in intracellular signaling, lipid homeostasis, and phagocytosis of apoptotic cells
<b>CD92</b>	SLC44A1, CTL1, CHTL1, RP11-287A8.1, p70		+	+				+	+	-	-	+	+	Choline transporter
<b>CD93</b>	C1QR1, C1qRP, MXRA4, C1qR(P), Dj737e23.1, GR11		-	-	-	-	-	+	+	-	-	+	-	Cell adhesion and clearance of apoptotic cells
<b>CD94</b>	KLRD1, Kp43	HLA class I, NKG2-A, p39	+	-		+		-	-	-	-	-	-	Regulation of NK cell activation and adhesion

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<b>CD95</b>	CD178, FASLG, APO-1, FAS, TNFRSF6, CD95L, APT1LG1, APT1, FAS1, FASTM, ALPS1A, TNFSF6, FASL	CD178 (Fas ligand)	+	+		+		+	+	-	-			Induction of apoptosis
<b>CD96</b>	TACTILE, MGC22596		+	-		+		-	-	-	-			Cell adhesion
<b>CD97</b>	TM&LN1, BL-KDD/F12	CD55 (DAF)	+	+	+	+		+	+	-	-			Following leukocyte activation is likely involved in cell adhesion and signaling
<b>CD98</b>	SLC3A2, 4F2, 4F2HC, 4T2HC, MDU1, NACAE, FRP-1, RL-388	Actin	+	+		+		+	+	+	-	+	+	Amino acid transport
<b>CD99</b>	MIC2, E2 antigen, MIC2X, MIC2Y, HBA71, MSK5X		+	+		+	+	+	-	+	+	+	+	Transmigration of monocytes and neutrophils across endothelial cell borders; T-cell activation
<b>CD99R</b>	CD99 Mab restricted		+	-		+	-	+		-	-			T-cell adhesion
<b>CD100</b>	SEMAJ, coll-4, C9orf164, FLJ33485, FLJ34282, FLJ39737, FLJ46484, M-sema-G, MGC169138, MGC169141, SEMA4D, SEMAJ	CD45, Serine kinase	+	+	-	+	-	+	+	-	-	-	-	Enhancement of B-cell and dendritic cell responses
<b>CD101</b>	IGSF2, P126, V7, BA27, BPC#4, P126, V7-LSB		+	-	+	-		+	+	-	-			Inhibition of T-cell proliferation
<b>CD102</b>	ICAM-2, Ly60	LFA-1, CD11b/CD18, Integrin $\alpha$ L $\beta$ 2	+	+				+	-		-	+		Mediates adhesive interactions important for antigen-specific immune response
<b>CD103</b>	HML-1, Integrin $\alpha$ E, ITGAE, OX62, HML1	E-Cadherin, Integrin $\beta$ 7	+	-		-		-	-	-	-	-	-	Promoting entry and retention of antigen specific CD8 effector molecules in epithelial compartments
<b>CD104</b>	Integrin $\beta$ 4, TSP1180, ITGB4, TSP-180	Laminins (I,II,IV,V), CD49F, Integrin $\alpha$ 6	-	-		-	+	-	-	-	-	+	+	Potentially involved in epidermal cell-basement membrane adhesion
<b>CD105</b>	Endoglin, HHT1, ORW, SH-2	TGF- $\beta$ 1, TGF- $\beta$ 3	-	-		-	+	+	-	-	-	+		May play a role in hematopoiesis and angiogenesis
<b>CD106</b>	VCAM-1, INCAM-100	Integrin $\alpha$ 4 $\beta$ 1, VLA-4	-	-	-	-		-	-	-	-	+		Adhesion of lymphocytes, monocytes, eosinophils, and basophils to vascular endothelium. It also functions in leukocyte-endothelial cell signal transduction
<b>CD107a</b>	LAMP-1, LAMPA, CD107a, LGP120		+	-		-			+	+	-	+		Provides selectins with carbohydrate ligands. CD107a has also been shown to be a marker of degranulation on lymphocytes such as CD8 <sup>+</sup> and NK cells.
<b>CD107b</b>	LAMP-2, LAMPB		+	-		-			+	+	-	+		Provides selectins with carbohydrate ligands. It may also function in the protection, maintenance, and adhesion of the lysosome.
<b>CD108</b>	SEMA7A, JMH blood group antigen	CD232, Tyrosine kinases	+	+					-	-	+			Stimulates cytokine production through monocytes and macrophages through integrin $\alpha$ 1
<b>CD109</b>	8A3, E123 7D1, 150kD TGF- $\beta$ -1-binding protein, Platelet-specific Gov antigen		+	-		-	+	-	-	+	-	+		May play a role in hematopoiesis and in cell-mediated immunity and in hemostasis

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<b>CD110</b>	TPO-R, MPL, C-MPL	TPO, JAK2	-	-	-	-	+	-	-	+	-	+	+	Maintenance of hematopoietic stem cell numbers
<b>CD111</b>	PVRL1, HveC, PRR1, Nectin1, HlgR, CLPED1	Nectin3, Afadin gD	-	+	-	-	+	+	-	+	+	+	+	Plays a role in the organization of adherens junctions and tight junctions in epithelial and endothelial cells.
<b>CD112</b>	HveB, PRR2, PVRL2, Nectin2	PRR3, Afadin, CD112	-	-	-	-	+	+	-	+	-	+	+	A plasma membrane component of adherens junctions. Serves as an entry for certain mutant strains of herpes simplex virus and pseudorabies virus, and it is involved in cell-to-cell spreading of these viruses. Contributes to the NK-mediated lysis of both iDCs and mDCs.
<b>CD113</b>	PVRL3, Nectin3, PRR3	Afadin, MLLT4, PARD3	-	-	-	-	-	-	-	-	-	-	+	An adhesion molecule involved in the formation between adherens junctions between epithelial cells.
<b>CD114</b>	CSF3R, G-CSFR, HG-CSFR	G-CSF, Jak1, Jak2	-	-	-	-	+	+	+	+	-	+	-	Proliferation, differentiation, and survival of cells along the neutrophilic lineage.
<b>CD115</b>	c-fms, CSF-1R, M-CSFR, FIM2, FMS	CSF-1, Phosphotyrosine binding proteins	-	-	-	-	+	+	-	-	-	-	-	Receptor for colony stimulating factor 1, a cytokine which controls the production, differentiation, and function of macrophages.
<b>CD116</b>	GM-CSFR $\alpha$ , CDw116, CSF2R, CSF2RAX, CSF2RAY, CSF2RX, CSF2RY, GM-CSF-R $\alpha$ , GMCSFR, GMR, MGC3848, MGC4838	GM-CSF, CD131	-	-	+	-	-	+	+	-	-	-	-	Receptor for cytokine granulocyte-macrophage colony-stimulating factor (GM-CSF) which regulates hematopoiesis and the function of mature host defense cells.
<b>CD117</b>	c-KIT, SCFR, PBT	SCF, MGF, KL, PI3-kinase	-	-	-	-	+	-	-	-	-	-	-	Receptor tyrosine kinase important for mast-cell survival, proliferation, activation, and chemotaxis.
<b>CD118</b>	LIFR, gp190, SJS2, STWS, SWS	IFN- $\alpha$ , IFN- $\beta$	-	-	-	-	-	-	-	-	-	-	+	Receptor for the leukemia inhibitory factor (LIF), a cytokine involved in cell differentiation, proliferation, and survival.
<b>CD119</b>	IFN $\gamma$ R, IFN $\gamma$ Ra	IFN $\gamma$ R, IFN $\gamma$ R1	+	+	-	+	-	+	+	-	-	+	-	Receptor for interferon $\gamma$ , a multifunctional immunomodulator
<b>CD120a</b>	CD120a, FPF, MGC19588, TBP1, TNF-R, TNF-R-I, TNF-R55, TNFAR, TNFR1, TNFR55, TNFR60, p55, p55-R, p60	TNF, TRADD, TRAF, RiP, Lt $\alpha$	+	+	+	+	-	+	+	-	-	+	+	Receptor for TNF- $\alpha$ , which can mediate apoptosis
<b>CD120b</b>	TNFR2, p75, TNFR p80	TNF, TRADD, TRAF, RiP, LT $\alpha$	+	+	+	+	-	+	+	-	-	+	+	Receptor for TNF- $\alpha$ , that recruits apoptotic suppressors antagonizing TNF- $\alpha$ activity
<b>CD121a</b>	Type 1 IL-1R, CD121A, D2S1473, IL-1R- $\alpha$ , IL1R, IL1RA, P80	IL-1 $\alpha$ and IL-1 $\beta$ , IL1RA	+	-	-	-	-	-	-	-	-	+	-	Receptor for IL-1 $\alpha$ and $\beta$ cytokines that induce inflammatory response
<b>CD121b</b>	Type 2 IL-1R	IL-1 $\beta$ , IL-1 $\alpha$ , IL1RA	+	+	-	-	-	+	-	-	-	-	-	Receptor for IL-1 $\alpha$ and $\beta$ cytokines that induce inflammatory response. Also binds the IL-1 receptor agonist protein.
<b>CD122</b>	IL2R $\beta$ , p70-75	IL-2, IL-15, CD25, CD132, Syk, Lck, Jak1, Stat5	+	+	-	+	-	+	-	-	-	-	-	B subunit of the receptor for IL-2, which is involved in receptor mediated endocytosis and transduction of mitogenic signals from IL-2

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<b>CD123</b>	CD123, IL3R, IL3RAY, IL3RX, IL3RY, MGC34174, hIL-3Ra	IL-3, CD131	-	-	+		+	-	+			+		A subunit of the IL-3 receptor and plays an important role in hematopoietic progenitor cell growth and differentiation
<b>CD124</b>	IL-4R $\alpha$	IL-4, IL-13, CD132, Jak1, Fes, Stat6, IRS-2	+	+	-	-	+	+	-	-	-	-	+	Receptor for both IL-4 and IL-13. Involved in Th2 differentiation and regulating IgE production.
<b>CD125</b>	IL-5R $\alpha$	CDw125, HSIL5R3, IL5R, MGC26560	-	+		-		-	+	-	-	-		A subunit of IL-5 receptor.
<b>CD126</b>	IL-6R $\alpha$	IL-6, CD130	+	+	-	-	+	-	-					A subunit of the receptor for IL-6, a pleiotropic cytokine that regulates cell growth and differentiation.
<b>CD127</b>	p90, IL-7R, IL-7R $\alpha$	IL-7, CD132, fyn, lyn, Jak1, PI3-kinase, Lck	+	-			+	+	-	-	-	-		Receptor for IL-7 and thymic stromal lymphopoietin (TSLP). This receptor is important for V(D)J recombination during development
<b>CD129</b>	IL-9R $\alpha$	IL-9	+										+	IL-9 receptor binding initiates STAT activation required for the proliferative and anti-apoptotic effects of this cytokine.
<b>CD130</b>	gp130, IL6ST, IL6- $\beta$ or CD130	Oncostatin M, LIF, IL-6, IL-11, CNF	+	+	-	+	+	+	+	-		+		A transmembrane protein which forms one subunit of type I cytokine receptors within the IL-6 receptor family. Often referred to as the common gp130 subunit, and is important for signal transduction following cytokine engagement.
<b>CD131</b>	CSF2RB, IL3RB, IL5RB, CDw131	CD123, CD125, CD116, JAK2, Shc, Grb2	-	-		-	+	+	+					CSF2RB is a common subunit to the following type 1 cytokine receptors: GM-CSF receptor, IL-3R, IL-5R.
<b>CD132</b>	Common $\gamma$ chain, IL-2R $\gamma$	CD25, CD122, CD124, CD127, IL-9R, JAK3, JAK1, Syk, Ick	+	+		+		+	+	-				Lymphocytes expressing the common $\gamma$ chain can form functional receptors for these cytokine proteins, which transmit signals from one cell to another and direct programs of cellular differentiation
<b>CD133</b>	AC133, PROML1, Prominin 1, Hematopoietic stem cell antigen		-	-	-	-	+	-	-	-	-	+	+	Suppression of cell differentiation
<b>CD134</b>	OX40, TNFRSF4	OX40 ligand	+		-			-						Member of the TNF-receptor superfamily which may suppress apoptosis
<b>CD135</b>	Flt3, Fik2, STK1	FL (Flt3 ligand)	-	-	-	-	+	-	-	-	-			Signaling through CD135 plays a role in cell survival, proliferation, and differentiation. CD135 is important for lymphocyte (B cell and T cell) development, but not for the development of other blood cells (myeloid development)
<b>CD136</b>	MSP-R, RON, p158-ron	MSP, HGFI, Shc, PLC- $\gamma$						+					+	Receptor for macrophage stimulating protein (MSP) that is a receptor tyrosine kinase
<b>CD137</b>	4-1BB, ILA, TNFRSF9	4-1BB ligand	+	+		-		+	-				+	A member of the TNF receptor superfamily that contributes to the clonal expansion, survival, and development of T cells
<b>CD138</b>	Syndecan-1, Heparan sulfate proteoglycan	Collagen I, III, V, Fibronectin, TSP	-	+		-	+	-	-	-	-	+	+	Cell proliferation, cell migration, and cell-matrix interactions
<b>CD139</b>	None		-	+	+	-	-	+	+		+			Unknown

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CD140a – CD156b

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<b>CD140a</b>	PDGF $\alpha$ Receptor	PDGF	-	-	-	-	-	-	-	+	-	+	-	Tyrosine kinase receptor which binds platelet derived growth factor (PDGF)
<b>CD140b</b>	PDGF $\beta$ Receptor	PDGF	-	-	-	-	-	-	-	-	-	+	-	Tyrosine kinase receptor which binds platelet derived growth factor (PDGF) B and D
<b>CD141</b>	Thrombomodulin, Fetomodulin	Thrombin, Protein C, TAFI	-	-	-	-	+	+	+	-	-	+	+	Receptor for thrombin that upon binding results in the activation of protein C. Activated protein C degrades clotting factors and reduces the amount of thrombin generated
<b>CD142</b>	Tissue factor, Thromboplastin, F3	Factor VIIa, Factor Xa/TFPI	-	-	-	-	+	-	-	-	-	+	+	Initiation of blood coagulation cascades
<b>CD143</b>	ACE, Peptidyl dipeptidase A, Kininase II, DCP, DCP1	ANG-1, Bradykinin	-	-	-	-	+	-	-	-	-	+	+	Converts angiotensin I to angiotensin II resulting in vasoconstriction
<b>CD144</b>	VE-Cadherin, Cadherin-5	$\beta$ -Catenin, p120 CAS, Plakoglobin	-	-	-	-	-	-	-	-	-	+	-	Calcium-dependent cell adhesion
<b>CDw145</b>	None					-	-	-	-	-	-	+	+	Unknown
<b>CD146</b>	Muc 18, S-endo, MCAM, Mel-CAM		+	-	-	-	-	-	-	-	-	+	-	Cell adhesion
<b>CD147</b>	Basigin, EMMPRIN, M6, OX47, TCSF		+	+	-	+	-	+	+	+	+	+	-	Spermatogenesis, embryo implantation, neural network formation, and tumor progression
<b>CD148</b>	HPTP- $\eta$ , p260, DEP-1, SCC1		+	+	+	+	-	+	+	+	-	-	-	Protein tyrosine phosphatase that negatively regulates T-cell receptor signaling
<b>CD150</b>	SLAM, IPO-3	Tyrosine phosphatase CD45, CD150	+	+	+	-	-	-	-	-	-	+	-	Important for bidirectional T-cell to B-cell stimulation
<b>CD151</b>	PETA-3, SFA-1	Integrins $\alpha$ 3, $\alpha$ 6	-	-	-	-	+	-	-	+	-	+	+	Cell adhesion and may regulate integrin trafficking and function
<b>CD152</b>	CTLA-4	CD80, CD86, PI3-kinase, PTP1D	+	+	-	-	-	-	-	-	-	-	-	T-cell inhibition
<b>CD153</b>	CD30L, TNSF8	CD30	+	-	-	-	-	+	+	-	-	-	-	TNF ligand family cytokine with pleiotropic activities. May inhibit modulation of Ig class switch. Induces proliferation of T cells
<b>CD154</b>	CD40L, gp39, TRAP-1, T-BAM, IMD3	CD40	+	-	-	-	-	-	-	-	-	-	-	Mediates B cell proliferation, IgE production, and is involved in immunoglobulin class switching
<b>CD155</b>	PVR, PVS, TAGE4, HVED		-	-	-	-	-	+	-	-	-	-	-	Cell attachment to extracellular matrix proteins. Mediates NK cell adhesion and triggers NK cell effector functions
<b>CD156a</b>	CD156, ADAM8, MS2	Myeloid	-	-	-	-	-	+	+	-	-	-	-	A Disintegrin and Metallproteinase (ADAM). May play a role in T-cell migration.
<b>CD156b</b>	TACE, ADAM17, cSVP	pro-TNF, pro-TGF $\alpha$ , MAD2	+	-	+	-	-	+	+	-	-	+	-	A Disintegrin and Metallproteinase (ADAM) which serves as a TNF- $\alpha$ converting enzyme. Also involved in the notch signaling pathway.

+ Positive\* – Negative

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CD	Alternative Name	Ligands & Associated Molecules	T Cell	B Cell	Dendritic Cell	NK Cell	Stem Cell/Precursor	Macrophage/Monocyte	Granulocyte	Platelet	Erythrocyte	Endothelial Cell	Epithelial Cell	Function
<b>CD156C</b>	ADAM10, MADM, kuz							+						A Disintegrin and Metallproteinase (ADAM) which cleaves many proteins including TNF- $\alpha$ and E-cadherin.
<b>CD157</b>	Mo5, BST-1	NAD, Cyclic ADP-ribose			+		+	+	+				+	Synthesizes cyclic ADP-ribose contributing to intracellular calcium release. Facilitates pre-B cell growth
<b>CD158a</b>	KIR2DL1, p58.1, NKAT1	HLA-Cw4, 2, 5, 6	+			+								Inhibits the activity of natural killer cells
<b>CD158b1</b>	KIR2DL2, p58.2, NKAT6	HLA-Cw3, 1, 7, 8	+			+								Inhibits the activity of natural killer cells
<b>CD158b2</b>	KIR2DL3, p58.3, NKAT2	HLA-Cw3, 1, 7, 8	+			+								Inhibits the activity of natural killer cells
<b>CD158d</b>	KIR2DL4, KIR103	HLA-Bw4				+								Inhibits the activity of natural killer cells
<b>CD158e1/e2</b>	KIR3DL1/S1, p70, NKAT3, NKB1	HLA-Bw4	+			+								Receptor on NK cells does not inhibit their activity
<b>CD158f</b>	KIR2DL5		+			+								Inhibits the activity of natural killer cells
<b>CD158g</b>	KIR2DS5		+			+								Receptor on NK cells does not inhibit their activity
<b>CD158h</b>	KIR2DS1, p50.1	HLA-C	+			+								Receptor on NK cells does not inhibit their activity
<b>CD158i</b>	KIR2DS4, p50.3	HLA-C	+			+								Receptor on NK cells does not inhibit their activity
<b>CD158j</b>	KIR2DS2, p50.2	HLA-C	+			+								Receptor on NK cells does not inhibit their activity
<b>CD158k</b>	KIR3DL2, p140	HLA-A	+			+								Inhibits the activity of natural killer cells
<b>CD159a</b>	NKG2A	CD94/CD159a heterodimer binds to HLA-E	+			+								Receptor for the recognition of MHC class I HLA-E molecules by NK and some cytotoxic T cells
<b>CD159c</b>	NKG2C	C type Lectin superfamily member				+								Receptor for the recognition of MHC class I HLA-E molecules by NK and some cytotoxic T cells
<b>CD160</b>	BY55, NK1, NK28	MHC class I	+	-		+								Broad specificity receptor for classical and non-classical MHC class I molecules
<b>CD161</b>	NKR, NKRP1A		+	-	-	+			-	-	-	-	-	Inhibits NK cell cytotoxicity. Enhances T-cell proliferation induced by anti-CD3.
<b>CD162</b>	PSGL-1	Selectins	+	+			+	+	+	-	-	-		Mediates rapid rolling of leukocytes over vascular surfaces during inflammation
<b>CD163</b>	M130, GHI/61, RM3/1	Hemoglobin	-	-	-			+	-	-	-	-	-	Clearance and endocytosis of hemoglobin/haptoglobin complexes by macrophages
<b>CD164</b>	MGC-24, MUC-24		+	+			+	+	-		-	-	+	Facilitates the adhesion of CD34 <sup>+</sup> cells to the stroma and negatively regulates their proliferation

CD156C – CD164

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CD165 – CD179b

CD	Alternative Name	Ligands & Associated Molecules	T Cell	B Cell	Dendritic Cell	NK Cell	Stem Cell/Precursor	Macrophage/Monocyte	Granulocyte	Platelet	Erythrocyte	Endothelial Cell	Epithelial Cell	Function
<b>CD165</b>	AD2, gp37						-	+	-	+	-		+	Cell adhesion
<b>CD166</b>	ALCAM, KG-CAM, SC-1, BEN, DM-GRASP	CD6, CD166, NgCAM	+	+				+	-			+	+	Cell adhesion molecule important for intrathymic T-cell development
<b>CD167a</b>	DDR1, trkE, cak	ShcA, FRS2, Collagens		+	+								+	Receptor tyrosine kinase involved in cell-cell interactions
<b>CD168</b>	RHAMM, IHABP, HMMR	Ras, Src, Erk, Actin, Calmodulin, MAPKK, Hyaluronic acid	-	-	+		+	+						Involved in cell motility
<b>CD169</b>	Sialoadhesin, Siglec-1	CD227, CD206, CD43, $\alpha$ 2, 3-Sialylated ligands			+			+						Macrophage-restricted cell adhesion molecule that mediates cell-cell interactions
<b>CD170</b>	Siglec-5	Sialylated glycans	-	+	+	-		+	+					Mediates protein-carbohydrate interactions
<b>CD171</b>	L1CAM, HSAS, HSAS1, MASA, MIC5, N-CAML1, S10, SPG1, NILE	CD171, Neurocan, Phosphocan, Laminin, CD9, CD24, CD56, Axonin-1, CD51/61, CD41/61, CD49e/CD29, $\alpha$ -9, Ankyrins, Kinases	+	+	+			+	+			+	+	Multidomain cell adhesion molecule required for normal neurohistogenesis.
<b>CD172a</b>	BIT, MFR, MYD-1, P84, SHPS-1, SHPS1, SIRP, SIRP $\alpha$ , SIRP $\alpha$ 2	CD47, PTPN11			+		+	+	+					Negative regulation of receptor tyrosine kinase-coupled signaling processes.
<b>CD172b</b>	SIRP $\beta$	TYROBP			+			+						Phagocytosis
<b>CD172g</b>	SIRP $\gamma$ , SIRP-B2, bA77C3.1		+			+								Cell adhesion
<b>CD173</b>	Blood group H type 2, FUT1					-	+				+	+		Involved in the creation of a precursor of the H antigen, which is required for the final step in the soluble A and B antigen synthesis pathway
<b>CD174</b>	Lewis Y, FUT3, Les, FT3B					-	+						+	Marker of early hematopoiesis
<b>CD175</b>	Tn		-	+	-	+							+	Potentially involved in cell adhesion
<b>CD175s</b>	Sialyl-Tn (s-Tn)		-	+	-	+						+	+	Potentially involved in cell adhesion
<b>CD176</b>	TF Antigen			-		+					+	+	+	Potentially involved in cell adhesion
<b>CD177</b>	NB1, HNA-2a, NB1gp, Neutrophil-specific antigen 1, PRV1							+						Neutrophil transmigration
<b>CD178</b>	Fas Ligand, FASL, CD95L, TNFSF6, APT1LG1	DcR3, CD95 (Fas), TNFRSF6B, PTPN12, FADD, TNFRSF1A	+	-	+		-	+	-	-	-	+	+	Apoptosis
<b>CD179a</b>	VpreB, IGVPB, VPREB1	CD179b, Ig $\mu$ heavy chain												May regulate Ig gene rearrangements in the early steps of B-cell differentiation
<b>CD179b</b>	lambda5, 14.1, IGL5, IGGL1	CD179a, Ig $\mu$ heavy chain												B-cell proliferation and differentiation

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<b>CD180</b>	RP105, Bgp95, Ly64, Ly78,	MD-1		+	+			+						Controls B-cell recognition and signaling of LPS
<b>CD181</b>	(formerly CD128a) CXCR1, IL-8R $\alpha$	IL-8	+					+	+					Chemotaxis
<b>CD182</b>	(formerly CD128b) CXCR2, IL-8R $\beta$ , CMKAR2, IL8R2	IL-8	+					+	+					Chemotaxis
<b>CD183</b>	CXCR3, GPR9, CKR-L2, CMKAR3, IP10, Mig-R, TAC	IP10, Mig, I-TAC	+			+	+		+					Chemotaxis, adhesion
<b>CD184</b>	CXCR4, NPY3R, Fusin, CMKAR4, LESTR, HM89, FB22, LCR1	SDF-1, viral MIP-2, CXCL12	+	+	+	-		+	-			+		Mediates blood cell migration in response to SDF-1
<b>CD185</b>	CXCR5, BLR1, MDR15, MGC117347	CXCL13, CCL13	+	+	+	+		+	-					Homing and cell movement
<b>CD186</b>	CXCR6, STRL33, TYMSTR, BONZO		+											Receptor for the C-X-C chemokine CXCL16
<b>CD191</b>	CCR1, CKR1, CD191, CKR-1, HM145, CMKBR1, MIP1 $\alpha$ R, SCYAR1	MIP-1 $\alpha$ , RANTES, MCP-3, MIP-5, LD78	+				+	+						Chemotaxis, adhesion
<b>CD192</b>	CCR2, CKR2, CCR2A, CCR2B, CKR2A, CKR2B, CMKBR2, MCP-1-R, CC-CKR-2, FLJ78302, MGC103828, MGC111760, MGC168006	MCPs	+	+				+	+			+		Receptor for MCP-1, which mediates monocyte chemotaxis
<b>CD193</b>	CCR3, CKR3, CMKBR3, CC-CKR-3, MGC102841	CCL11, CCL26, MCP-3 (CCL7), MCP-4 (CCL13), RANTES(CCL5)	+		+				+				+	Cell adhesion, cellular defense response
<b>CD194</b>	CCR4, CC-CKR-4, CKR4, CMKBR4, ChemR13, HGCM	MIP-1, RANTES, TARC, MCP-1	+					+		+				Homing receptor for circulating memory lymphocytes
<b>CD195</b>	CCR5, CMKBR5, IDDM22, CC-CKR-5, FLJ78003	MIP-1a, 1b, MCP-2, RANTES	+	-		-		+	+	-	-	-		Regulates lymphocyte chemotaxis activation during and transendothelial migration during inflammation
<b>CD196</b>	CCR6, BN-1, DCR2, DRY6, CKRL3, GPR29, CKR-L3, CMKBR6, GPRCY4, STRL22, CC-CKR-6	MIP-3a	+	+	+	-		-	-					B-lineage maturation and antigen-driven B-cell differentiation
<b>CD197</b>	CCR7 (formerly CDw197), BLR2, EBI1, CMKBR7	CCL19/ECL, CCL21	+	+	+									Activates B and T lymphocytes, stimulates dendritic cell maturation
<b>CDw198</b>	CCR8,CKR-L1, CKRL1, CMKBR8, CMKBRL2, CY6, GPR-CY6, TER1	I-309, TARC, MIP-1b	+					+						Monocyte chemotaxis and thymic cell apoptosis; preferentially expressed in the thymus
<b>CDw199</b>	CCR9, GPR28, GPR-9-6	CCL25	+											Chemotaxis, cellular defense response
<b>CD200</b>	OX2, MRC, MOX1, MOX2	CD200R1	-	+	+	-	+	-	-	-	-	+		Co-stimulates T-cell proliferation. May regulate myeloid cell activity

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CD201 – CD213a2

CD	Alternative Name	Ligands & Associated Molecules	T Cell	B Cell	Dendritic Cell	NK Cell	Stem Cell/Precursor	Macrophage/Monocyte	Granulocyte	Platelet	Erythrocyte	Endothelial Cell	Epithelial Cell	Function
<b>CD201</b>	EPCR, CCCA, CCD41, MGC23024, ba4204.2, PROCR	Protein C					+					+		Cytoprotection
<b>CD202b</b>	TEK, Tie2, VMCM, TIE-2, VMCM1	Angiopoietin-1, 2, and 4										+		Migration and signaling
<b>CD203c</b>	PDNP3, B10, PDIβ, E-NPP3	cAMP, NAD, Nucleoside phosphates							+					Ectoenzyme involved in the hydrolysis of extracellular nucleotides
<b>CD204</b>	MSR, SR-A, phSR1, phSR2, SCARA1, MSR1	LDL, β-Amyloid fibrils						+						Macrophage scavenger receptor that mediates the endocytosis of modified low density lipoproteins (LDLs)
<b>CD205</b>	DEC-205, CLEC13B, GP200-MR6, LY75	MIR98	+	+	+		+	+						Phagocytosis, endocytosis
<b>CD206</b>	Mannose receptor C type-1 (MRC1), Macrophage mannose receptor (MMR), C-type Lectin domain family 13 member D (CLEC13D)	Glycoforms of sialoadhesin (CD169) and CD45, Bacterial cell wall molecules, Viral glycoproteins, Yeast proteins, Chitin, Lysosomal hydrolases, Plant glycoproteins, Neoglycoproteins, Lutropin, Chondroitin sulfate			+			+				+	+	Pathogen receptor; Ag endocytosis
<b>CD207</b>	Langerin, C-type Lectin domain family 4 member K (CLEC4K)	Mannose-bearing glycoproteins and glycolipids on microbial pathogens, including HIV gp120			+									Pathogen receptor; Ag endocytosis; Birbeck granule formation
<b>CD208</b>	Lysosomal-associated membrane protein 3 (LAMP3), DC-LAMP, DCLAMP, LAMP, TSC403				+									Ag processing
<b>CD209</b>	Dendritic cell-specific ICAM-3-grabbing non-integrin (DC-SIGN), DC-SIGN1, CDSIGN, C-type lectin domain family 4 member L (CLEC4L), HIV gp120-binding protein	CD50 (ICAM-3), CD102 (ICAM-2), Mannose-bearing glycoproteins on several pathogens including HIV gp120			+			+				+		DC migration; T-cell proliferation; pathogen receptor; HIV-1 receptor; Ag endocytosis and degradation
<b>CD210a</b>	Interleukin 10 Receptor A (IL-10RA, IL-10R1)	IL-10, vIL-10	+	+	-	-		+	-					Cytokine receptor; Immunoregulation
<b>CDw210b</b>	Interleukin 10 Receptor B (IL-10RB, IL-10R2)	IL-10 and vIL-10	+	+	+	+		+						Cytokine receptor; Immunoregulation
<b>CD212</b>	Interleukin 12 receptor β1 chain (IL-12β1), IL-12β, CD212b1	IL-12, IL-23, associates with IL-12Rβ2 or IL-23R to form high-affinity receptors	+	+	-	+		-	-					Dimerizes with IL-12Rβ2 to form high-affinity IL-12 receptor, promoting cell-mediated and Th1 immunity. Combines with IL-23R to form IL-23 receptor; promoting Th17 immunity
<b>CD213a1</b>	Interleukin 13 receptor α1 chain (IL-13Rα1), NR4	IL-13, IL-4, associates with IL-4Rα to form receptors		+	+			+				+		Associates with IL-4Rα to form the IL-13 receptor, regulating inflammation and supporting B cell activity. Also involved in the type II IL-4 receptor system.
<b>CD213a2</b>	Interleukin 13 receptor α2 chain (IL-13Rα2), interleukin-13-binding protein (IL13BP)	IL-13		+				+					+	Reduces the biological effects of IL-13

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<b>CD215</b>	Interleukin 15 receptor alpha chain (IL-15RA)	IL-15	+	+	-	-		-	-					Associates with CD132 and CD122 to form the IL-15 receptor, regulating apoptosis and phagocytosis, crucial for generation and maintenance of memory CD8 <sup>+</sup> T cells
<b>CD217</b>	Interleukin 17 receptor A (IL-17RA), IL-17R, CDw217	IL-17A, vIL-17, IL-17F (weak binding), associates with IL-17RC to form receptor for IL-17A, IL-17F, and IL-17A/F heterodimers, associates with IL-17RB to form receptor for IL-17E (IL-25)	+	+	+	+	+	+	+			+	+	Associates with IL-17RC to form receptor for IL-17A, IL-17F, and IL-17A/F heterodimers, promoting inflammatory responses. Associates with IL-17RB to form receptor for IL-17E (IL-25), suppressing Th17 responses and promoting Th2 responses.
<b>CD218a</b>	Interleukin 18 receptor 1 (IL-18R1), IL-18RA, IL-18R $\alpha$ , IL1 receptor-related protein (IL-1Rrp), IL-R5, CDw218a	IL-18, associates with IL-18R $\beta$ to form high-affinity IL-18 receptor	+	+	+	+			+			+		Associates with IL-18R $\beta$ to form high-affinity IL-18 receptor, promoting inflammatory Th1 and Th2 responses
<b>CD218b</b>	Interleukin 18 receptor $\beta$ (IL-18R $\beta$ ), IL-18 receptor accessory protein (IL-18RAP, IL-18RAcP), IL-1R accessory protein-like (IL-1RAcPL), IL-1R7, CDw218b	Associates with IL-18R $\alpha$ to form high-affinity IL-18 receptor	+	+	+	+			+					Associates with IL-18R $\beta$ to form high-affinity IL-18 receptor, promoting inflammatory Th1 and Th2 responses
<b>CD220</b>	Insulin receptor (INSR), IR	Insulin, IGF-2	+	+	+	+	+	+	+			+	+	Insulin receptor. Causes internalization and degradation of insulin and stimulates glucose uptake
<b>CD221</b>	Insulin-like growth factor 1 receptor (IGF1R), IGF-1R, type I IGF receptor (IGF-IR), JTK13	Insulin-like growth factor 1 (IGF-I), IGF-II, Insulin	+	+	+	+	+	+	+			+	+	Receptor for IGF-I and IGF-II. Mediates mitogenic and anti-apoptotic signals
<b>CD222</b>	Cation-independent mannose-6-phosphate receptor (M6P-R, CIM6PR, CIMPR, CI-MPR), Insulin-like growth factor 2 receptor (IGF2R, IGFIIR, IGF-IIR), MPR1, MPRI	IGF-II, TGF- $\beta$ latency-associated peptide (LAP), Proliferin, Prorenin, Plasminogen, Leukemia inhibitory factor (LIF), Herpes simplex virus, Thyroglobulin, Retinoic acid, Cathepsin B, D, L, Mannose-6-phosphate (M6P)-containing proteins, CD87	+	+	+	+	+	+	+			+	+	Receptor that internalizes various extracellular ligands and directs them to lysosomes. Associates with CD87 to activate latent TGF- $\beta$ . Binding IGF-II stimulates insulin secretion. Mediates proliferin-induced angiogenesis
<b>CD223</b>	Lymphocyte activation gene 3 (LAG3, LAG-3), FDC protein	MHC class II, TCR-CD3 complex	+	-	-	+	+							Binds MHC class II with high affinity and regulates homeostatic expansion of T cells through association with TCR-CD3 complex. Allows activated T cells to fully activate monocytes and dendritic cells.
<b>CD224</b>	$\gamma$ -Glutamyl transferase 1 (GGT1), $\gamma$ -Glutamyl transpeptidase 1 (GGTP), GGT, GTG, EC2.3.2.2	Glutathione, GSH, Leukotriene C4, GSNO	+	+			+	+				+	+	Protects cells from oxidative stress by participating in $\gamma$ -glutamyl cycle
<b>CD225</b>	Interferon-induced transmembrane protein 1 (IFITM1), Interferon-induced protein 17 (IFI17), Interferon-inducible protein 9-27 (9-27), Leu13, fragilis2	CD21, CD19, TAPA-1, CD81	+	+		+	+					+		Expression is induced by IFN- $\alpha$ and IFN- $\gamma$ . Component of the CD21/CD19/TAPA-1 complex, which is involved in B-cell activation

CD215 – CD225

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<b>CD226</b>	DNAX accessory molecule 1 (DNAM-1), Platelet and T-cell activation antigen 1 (PTA-1), T lineage-specific activation antigen 1 antigen (TLISA1)	CD112, CD155, LFA-1 when phosphorylated by PKC	+	+		+	+	+	-	+	-		-	Involved in platelet adhesion and activation, megakaryocyte adhesion and maturation, and adhesion of cytotoxic T and NK cells to target cells. Important for tumor immunosurveillance
<b>CD227</b>	Mucin 1 (MUC1, MUC-1), DF3 antigen, H23 antigen, Peanut-reactive urinary mucin (PUM), Polymorphic epithelial mucin (PEM), Epithelial membrane antigen (EMA), Tumor-associated mucin, Episialin	CD54, CD169, Selectins, Grb2, $\beta$ -Catenin, GSK-3 $\beta$	+	+	+		+	+					+	Involved in cell-cell interactions and adhesion. May confer cell surface protection by protruding from the cell surface. Cytoplasmic tail is involved in many cell signaling pathways
<b>CD228</b>	Melanotransferrin (MT, MTF1), p97 Melanoma antigen (p97, MAP97), Mfi2, gp95	Iron, Plasminogen, pro-UPA					+					+		Presumed role in iron transport based on high affinity binding or iron. Influences migration of endothelial and melanoma cells
<b>CD229</b>	Lymphocyte antigen 9 (Ly9), T-lymphocyte surface antigen Ly-9, Signaling lymphocyte activation molecule family member 3 (SLAMF3), Lgp100, T100	CD229 (homophilic binding), SAP, Grb2	+	+	+	+	+	-	-	-	-			Homophilic binding may promote T cell/B cell adhesion. Promotes Th2 polarization and T-cell activation
<b>CD230</b>	Prion protein (PrP, PRNP), Major prion protein, prP27-30, prP33-35C, PrPc	CD230 (homophilic binding), N-CAM (CD56)	+	+	+	+	+	+	+			+	+	Unknown function, but implicated in copper binding, oxidative stress homeostasis, cell survival, and signal transduction.
<b>CD231</b>	Tetraspanin 7 (TSPAN7), T-cell acute lymphoblastic leukemia-associated antigen 1 (TALLA-1), Transmembrane 4 superfamily member 2 (TM4SF2), Membrane component X chromosome surface marker-1 (MXS1), A15		T-ALL											Neuronal function. Marker for T-cell acute lymphoblastic leukemia (T-ALL)
<b>CD232</b>	Plexin C1 (PLXNC1), Virus-encoded semaphorin protein receptor (VESPR, VESP-R)	Semaphorin 7A (CD108), Poxvirus semaphorin A39R		+	+	+		+	+					May be involved in promoting DC adhesion and migration. Binding of poxvirus semaphorin A39R induces cytoskeletal rearrangement and secretion of IL-6 and IL-18
<b>CD233</b>	Solute carrier family 4 anion exchanger member 1 (SLC4A1), Band 3, Anion exchanger 1 (AE1), Diego blood group, Erythroid protein band 3 (EPB3)	Glycophorin A, Ankyrin, Hemoglobin, Glycolytic enzymes	-	-	-	-		-	-		+			Mediates anion exchange and bicarbonate export in erythrocytes and kidney cells. Links red cell cytoskeleton to membrane. Regulates several glycolytic enzymes.
<b>CD234</b>	Duffy antigen/chemokine receptor (DARC), Duffy blood group antigen (Dfy, FY), Fy-Glycoprotein, Glycoprotein D	CXCL1 (MGSA), CXCL8 (IL-8), CCL2 (MCP-1), CCL5 (RANTES), Malarial parasites Plasmodium knowlesi and P. vivax	-	-	-	-		-	-		+	+	+	Binds and internalizes several chemokines, modulating levels in blood by acting as both a sink and a reservoir. Receptor allowing malarial parasite entry into erythrocytes
<b>CD235a</b>	Glycophorin A (GYPA), Sialoglycoprotein $\alpha$ , Sialoglycoprotein A, MN blood group antigen, PAS-2	CD170, Influenza virus, Plasmodium falciparum erythrocyte binding antigen EBA-175	-	-	-	-	+	-	-		+			Major sialoglycoprotein of the erythrocyte membrane. Contains the M/N blood group antigens. Prevents agglutination. Receptor allowing parasite entry into erythrocytes

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CD	Alternative Name	Ligands & Associated Molecules	T Cell	B Cell	Dendritic Cell	NK Cell	Stem Cell/Precursor	Macrophage/Monocyte	Granulocyte	Platelet	Erythrocyte	Endothelial Cell	Epithelial Cell	Function
<b>CD235b</b>	Glycophorin B (GYPB), Sialoglycoprotein δ, ss-Active sialoglycoprotein, SS blood group antigen, PAS-3						+				+			Major sialoglycoprotein of the erythrocyte membrane. Contains the S/s blood group antigens. Prevents agglutination
<b>CD236</b>	Glycophorin C & D (GYPC & GYPD), Glycophorin C/D, Gerbich blood group antigen, CD236R (glycophorin C only)	Plasmodium falciparum erythrocyte binding protein 2 (PfEBP-2), p55, band 4.1					+				+			Minor sialoglycoprotein of the erythrocyte membrane. Contains the Gerbich blood group antigens. Interacts with p55 and band 4.1 to maintain mechanical stability and deformability in erythrocytes. Receptor allowing parasite entry into erythrocytes
<b>CD236R</b>	Glycophorin C, GYPC	Plasmodium falciparum erythrocyte binding protein 2 (PfEBP-2), p55, band 4.1					+				+			Minor sialoglycoprotein of the erythrocyte membrane. Contains the Gerbich blood group antigens. Interacts with p55 and band 4.1 to maintain mechanical stability and deformability in erythrocytes. Receptor allowing parasite entry into erythrocytes
<b>CD238</b>	Kell blood group glycoprotein (Kel), Kell blood group antigen, Endothelin-3-converting enzyme (ECE3)	Big endothelin-3 (intermediate precursor of endothelin-3)					+				+			Contains the Kell blood group antigens. Zinc endopeptidase that cleaves endothelin-3 to its active form
<b>CD239</b>	Basal cell adhesion molecule (BCAM, B-CAM), Lutheran blood group glycoprotein, Lutheran blood group antigen (Lu)	α5 chain of Laminin 10/11									+	+	+	Contains the Lutheran blood group antigens. Adhesion molecule with proposed roles in epithelial cell cancer and in vaso-occlusion by red blood cells in sickle cell disease
<b>CD240</b>	Rh blood group system, CD240CE (Rh30CE, Cc & Ee blood antigens), CD240D (Rh30D, D blood antigen), CD240DCE (Rh30D/CE)	CD241, CD242, CD47, CD235b					+				+			Contains the Rh blood group antigens. Forms large complex through interactions with other erythrocyte membrane proteins. May help maintain erythrocyte mechanical properties by associating with cytoskeletal ankyrin-R
<b>CD241</b>	RhAG, Rh50A, RH2	ANK1	-	-	-	-	-	-	-	-	+			May have transport or channel function in erythrocyte membranes
<b>CD242</b>	ICAM4, LW	LFA-1, Mac-1, VLA-4	-	-	-	-	+	-	-	-	+	+		Ligand for the leukocyte adhesion protein LFA-1
<b>CD243</b>	ABC20, CD243, CLCS, GP170, MDR1, P-gp, PGY1		-	-		-	+	-	-	-	-			Transports various substrates across the cell membrane
<b>CD244</b>	2B4, NAIL, NKR2B4, Nmrk, SLAMF4	CD48	+	-	+	+		+	+					Modulation of other receptor-ligand interactions to enhance leukocyte adhesion and NK-cytolytic activity
<b>CD245</b>	p220/240	Lymphocyte receptor	+											Unknown
<b>CD246</b>	ALK, TFG/ALK, NBLST3	Pleiotrophin	+									+		Plays an important role in the development of the brain and exerts its effects on specific neurons within the nervous system
<b>CD247</b>	CD3-ζ, CD3H, CD3Q, CD3Z, T3Z, TCRZ	Janus kinase 3, Protein unc-119 homolog	+			+								Couples antigen recognition to several intracellular signaling pathways
<b>CD248</b>	TEM1, Endosialin, CD164L1, MGC119478, MGC119479											+		Tissue remodeling and peripheral lymph node expansion

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<b>CD249</b>	APA, gp160, EAP, ENPEP												+	Potentially involved in regulating the growth and differentiation of early B lineage cells and in the catabolic pathway of the renin-angiotensin system
<b>CD252</b>	TNFSF4, GP34, OX40L, TXGP1, CD134L, OX40L, OX40L	CD134 (OX40)		+	+								+	Co-stimulates T-cell proliferation and cytokine production
<b>CD253</b>	TNFSF10, TL2, APO2L, TRAIL, Apo-2L	Apo2	+	+				+						Induces cell death by apoptosis
<b>CD254</b>	TRANCE, RANKL, TNFSF11, ODF, OPGL, sOdf, OPTB2, hRANKL2	RANK	+											Involved in dendritic cell maturation
<b>CD256</b>	TNFSF13, APRIL, TALL2, TRDL-1, UNQ383/PRO715	TNFRSF17/BCMA, TACI	+		+			+	+					Important for B cell development
<b>CD257</b>	TNFSF13b, BAFF, BLYS, TALL1, THANK, TNFSF20, ZTNF4	TNFRSF13B/TACI, TNFRSF17/BCMA, TNFRSF13C/BAFFR	+	+	+	+		+	+					A potent B cell activator. Plays an important role in the proliferation and differentiation of B cells
<b>CD258</b>	TNFSF14, LTg, TR2, HVEM, LIGHT	TNFRSF14/HVEM	+	+	+	-		+	+					A costimulatory factor for the activation of lymphoid cells and as a deterrent to infection by herpesvirus.
<b>CD261</b>	TNFRSF10a, APO2, DR4, MGC9365, TRAILR1	TRAIL, DAP3	+	+	-	+		+	+					Involved in cell death processes
<b>CD262</b>	TNFRSF10b, KILLER/DR5, TRAILR2, TRICK2, TRICK2A, TRICK2B, TRICKB, ZTNFR9	TNFSF10, TRAIL	+	+	-	+		+	+					Involved in cell death processes
<b>CD263</b>	TNFRSF10c, DCR1, LIT, TRAILR3, TRID	TRAIL	+	+	+	+		+	+					An antagonistic receptor that protects cells from TRAIL-induced apoptosis
<b>CD264</b>	TNFSF10d, DCR2, TRAILR4, TRUNDD	TRAIL	+	+	-	+		+	+					Plays an inhibitory role in TRAIL-induced cell apoptosis
<b>CD265</b>	TNFRSF11a, EOF, FEO, ODFR, OFE, PDB2, RANK, TRANCER	TNFSF11, RANKL, TRANCE, OPGL			+			+						Essential for RANKL-mediated osteoclastogenesis. Involved in the regulation of interactions between T cells and dendritic cells.
<b>CD266</b>	TNFRSF12A, FN14, TWEAKR	TWEAK											+	Angiogenesis and cell proliferation of endothelial cells.
<b>CD267</b>	TNFRSF13B, CVID, TACI, FLJ39942, MGC39952, MGC133214, TNFRSF14B	TALL1, BLYS, BAFF	+	+	-			+	-					Controls T-cell-independent B cell antibody responses, isotype switching, and B cell homeostasis
<b>CD268</b>	TNFRSF13C, BAFFR, CD268, BAFF-R, MGC138235	BAFF	+	+	-	-		+	+					The principal receptor required for BAFF-mediated mature B-cell survival
<b>CD269</b>	TNFRSF17, BCM, BCMA	TNFSF13B, TALL-1, BAFF			+									Promotes B-cell survival
<b>CD270</b>	TNFRSF14, HVEM	CD258, CD272, CD160	+	+	+	+		+	+					Apoptosis and activation
<b>CD271</b>	NGFR, Gp80-LNGFR, TNFRSF16, p75(NTR), p75NTR	NGF, BDNF, NT-3, NT-4			+									Apoptosis, differentiation, neurogenesis

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<b>CD272</b>	BTLA1, FLJ16065, MGC129743	B7H4	+	+	+	-		+	-					Ligand for tumour necrosis factor (ligand) superfamily, member 14 (TNFSF14), also known as herpes virus entry mediator (HVEM). BTLA-HVEM complexes negatively regulates T-cell immune responses.
<b>CD273</b>	B7DC, Btdc, PDL2, CD273, PD-L2, PDCD1L2, MGC142238, MGC142240, bA574F11.2, PDCD1LG2	PD2	+		+			+						Modulation of T-cell proliferation (positive or negative depending on binding)
<b>CD274</b>	B7-H, B7H1, PDL1, PD-L1, PDCD1L1, PDCD1LG1, MGC142294, MGC142296, CD274	PD1	+	+	+	+		+	+					Found on activated T cells, B cells, and myeloid cells, to modulate activation or inhibition
<b>CD275</b>	B7H2, GL50, B7-H2, B7RP1, CD275, ICOSL, LICOS, B7RP-1, ICOS-L, KIAA0653, ICOSLG	ICOS	+	+	+	-		+	+					Positive regulation of activated T-cell proliferation, T and B-cell activation.
<b>CD276</b>	B7H3, B7-H3, 4lg-B7-H3, CD276	ICOS			+			+						Co-stimulatory B7 molecules (e.g., B7-1, or CD80) signal through CD28 family molecules such as CD28, CTLA4, and ICOS.
<b>CD277</b>	BTF5, BT3.1, CD277, MGC141880, BTN3A1		+	+	+	+	+	+						Lipid metabolic process
<b>CD278</b>	AILIM, CD278, MGC39850, ICOS	B7-H3	+											A CD28-superfamily costimulatory molecule that is expressed on activated T cells. It is thought to be important for Th2 cells
<b>CD279</b>	PD1, CD279, SLEB2, hPD-1, hPD-I, PDCD1	PDL1	+	+										Expressed in pro-B-cells and is thought to play a role in their differentiation
<b>CD280</b>	CD280, UPARAP, CLEC13E, ENDO180, FLJ35911, KIAA0709, MRC2, KIAA0709	uPARAP				+		+					+	Functions in cell motility and remodeling of the extracellular matrix by promoting cell migration and uptake of collagens for intracellular degradation
<b>CD281</b>	TIL, CD281, rsc786, KIAA0012, MGC104956, MGC126311, MGC126312, TIL. LPRS5, DKFZp54710610, DKFZp56410682, TLR1	Bacterial lipoprotein						+	+					Plays a fundamental role in pathogen recognition and activation of innate immunity.
<b>CD282</b>	TIL4, CD282, TLR2	Peptidoglycan						+	+					Plays a role in pathogen recognition and activation of innate immunity and mediates host response to Gram-positive bacteria and yeast via stimulation of NF-κB
<b>CD283</b>	TLR3, TOLL-like receptor 3	dsRNA	+	+	+	-		-	-					Recognizes dsRNA associated with viral infection, and induces the activation of NF-κB and the production of type I interferons. It may thus play a role in host defense against viruses.
<b>CD284</b>	TOLL, CD284, hToll, ARMD10, TLR4	LPS						+						Implicated in signal transduction events induced by lipopolysaccharide (LPS) found in most gram-negative bacteria.
<b>CD286</b>	CD286, TLR6, TOLL-like receptor 6	LPS			+			+					+	Receptor functionally interacts with toll-like receptor 2 to mediate cellular response to bacterial lipoproteins

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<b>CD288</b>	CD288, MGC119599, MGC119600, TLR8, TOLL-like receptor 8	CpG oligonucleotides, MyD88	+		+			+						Participates in the innate immune response to pathogens
<b>CD289</b>	TLR9, TOLL-like receptor 9	CpG oligonucleotides	+	+	+	-		+	+					Receptor mediates the cellular response to unmethylated CpG dinucleotides in bacterial DNA to mount an innate immune response
<b>CD290</b>	TLR10, TOLL-like receptor 10	MyD88	+	+	+				+					May participate in the innate immune response to pathogens
<b>CD292</b>	BIMPR1A, 10q23del, ACVRLK3, ALK3, SKR5	Members of TGF-β superfamily					+							BMPR1A is necessary for the extracellular matrix deposition by osteoblasts
<b>CDw293</b>	BMPR1B, ALK-6, ALK6,	BMPs (members of the TGF-β superfamily)					+							Involved in endochondral bone formation and embryogenesis
<b>CD294</b>	CRTH2, PGRD2, G protein-coupled receptor 44 (GPR44), DL1R, DP2	Prostaglandin D2	+						+					A prostaglandin D2 receptor that mediates the pro-inflammatory chemotaxis of eosinophils, basophils, and Th2 lymphocytes generated during allergic inflammation
<b>CD295</b>	LEPR, OBR	Leptin	+	+	+	+	+	+	+	+		+	+	Receptor for leptin (an adipocyte-specific hormone that regulates body weight), and is involved in the regulation of fat metabolism, as well as in a novel hematopoietic pathway that is required for normal lymphopoiesis.
<b>CD296</b>	ART1, ADP-ribosyltransferase 1, RT6, ART2, MGC133217	Arginine residues in proteins	+										+	Catalyzes the ADP-ribosylation of arginine residues in proteins
<b>CD297</b>	ART4, ADP-ribosyltransferase 4, Dombrock blood group glycoprotein, DO, DOK1	Antigens of the Dombrock blood group system are located on the gene product, which is glycosylphosphatidylinositol-anchored to the erythrocyte membrane.						+				+		Member of the ADP-ribosyltransferase gene family but enzymatic activity has not been demonstrated experimentally
<b>CD298</b>	ATP1B3, Na K ATPase β3 subunit, ATPB-3, FLJ29027	Part of the glycoprotein subunits of Na <sup>+</sup> /K <sup>+</sup> -ATPase.	+	+	+	+	+	+	+	+				Establishing and maintaining the electrochemical gradients of Na and K ions across the plasma membrane
<b>CD299</b>	DCSIGN-related, L-SIGN, DCSIGNR, HP10347, DC-SIGN2, DC-SIGNR, MGC47866, MGC12996, CLEC4M	Carbohydrate ligands on the surface of microbes and endogenous cells										+		The encoded protein is involved in the innate immune system and recognizes numerous evolutionarily divergent pathogens ranging from parasites to viruses
<b>CD300a</b>	IRC1, IRC2, CLM-8, IRp60, IGSF12, CMRF35H, CMRF-35H, CMRF35-H, CMRF35H9, CMRF35-H9, IRC1/IRC2, CMRF-35-H9	Unknown	+	+	+			+						NK cell function; also suppresses the effects of eotaxin, IL-5 and GM-CSF on neutrophils; and inhibits Ig-E dependent, but not Ig-E independent, activities on mast cells.
<b>CD300c</b>	CMRF-35A, LIR, CLM-6, CMRF35, IGSF16, CMRF-35, CMRF35A, CMRF35A1, CMRF35-A1	Unknown	+	+	+			+						Unknown
<b>CD300e</b>	CMRF-35L1, CLM2, CLM-2, IREM2, PIgR2, IREM-2, PIgR-2, CD300LE, CMRF35-A5	Unknown			+			+						Activating receptor of the immunoglobulin (Ig) superfamily that mediates activating signals by interacting with DAP12

CD288 – CD300e

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<b>CD301</b>	MGL1, CLEC10A, CLECSF14, HML	Terminal galactose and N-acetylglucosamine units linked to serine or threonine			+			+						Possible roles in cell adhesion, glycoprotein turnover, and inflammation
<b>CD302</b>	DCL1	F-actin			+			+	+					Cell adhesion, migration, endocytosis, and phagocytosis
<b>CD303</b>	BDCA2, CLEC4C	TLR-9			+									Antigen-capture
<b>CD304</b>	Neuropilin 1	VEGF			+									Angiogenesis, axon guidance, cell survival, migration, and invasion
<b>CD305</b>	LAIR1	PTPN6, PTPN11	+	+	+	+		+	+					Negative regulator of NK, B, and T cells
<b>CD306</b>	LAIR2	LAIR1, Collagen	+	+				+						Soluble receptor that modulates LAIR1 (CD305)
<b>CD307a</b>	FCRL1, IRTA5		-	+	-	-		-	-					B cell activation and differentiation
<b>CD307b</b>	FCRL2, IRTA4		-	+	-	-		-	-					B cell activation and differentiation
<b>CD307c</b>	FCRL3, IRTA3		+	+	-	-		-	-					B cell activation and differentiation
<b>CD307d</b>	FCRL4, IRTA1		-	+	-	-		-	-					B cell activation and differentiation
<b>CD307e</b>	FCRL5, IRTA2		-	+	-	-	-	-	-					B cell activation and differentiation
<b>CD309</b>	VEGFR2, KDR, Flk1	VEGF					+					+		Vascular development and regulation of vascular permeability
<b>CD312</b>	EMR2	Chondroitin sulphates			+			+	+					Cell adhesion and migration
<b>CD314</b>	NKG2D	MICA, MICB, ULBP2, ULBP1	+	+	-	+		+	+					Receptor for the recognition of MHC class I HLA-E molecules
<b>CD315</b>	PTGFRN, CD9P1	CD9, CD81		+				+						Cell motility
<b>CD316</b>	EWI2, IGSF8	CD82, CD81, CD9	+	+		+								Potentially a negative regulator of cell motility
<b>CD317</b>	BST2		+	+	+	+		+						Tethering mature virions to the host cell surface preventing egress of enveloped viruses
<b>CD318</b>	CDCP1	N-Cadherin, P-Cadherin, Syndecan-1, Syndecan-4					+							Cell differentiation, homing and dissemination. May also have a pro-survival role
<b>CD319</b>	CRACC, SLAMF7	CD319	+	+	+	+		+	-					NK cell activation; may also be involved in lymphocyte adhesion
<b>CD320</b>	8D6	8D6 Antigen, FDC			+									Augments the proliferation of plasma cell precursors
<b>CD321</b>	JAM1, F11 receptor		+	+		+		+	+	+	+	+	+	Plays a role in epithelial tight junction formation. Also involved in regulating monocyte transmigration involved in integrity of epithelial barrier. Involved in platelet activation.

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CD322	JAM2											+		May play a role in the processes of lymphocyte homing to secondary lymphoid organs.
CD324	E-Cadherin						+						+	A calcium dependent cell adhesion protein. E-Cad/CTF2 promotes non-amyloidogenic degradation of Aβ precursors.
CD325	N-Cadherin						+							Functions during gastrulation and is required for the establishment of left-right asymmetry.
CD326	Ep-CAM												+	A homotypic calcium-independent T-cell adhesion molecule
CD327	Siglec6, CD33L	Silylated glycans		+										Putative adhesion molecule that mediates sialic-acid dependent binding to cells.
CD328	Siglec7	Silylated glycans	+	+	+	+		+	+					Putative adhesion molecule that mediates sialic-acid dependent binding to cells. Mediates inhibition of natural killer cell cytotoxicity. May play a role in hematopoiesis. Inhibits differentiation of CD34 <sup>+</sup> cell precursors towards myelomonocytic cell lineage and proliferation of leukemic myeloid cells (in vitro).
CD329	Siglec9	Silylated glycans, sMUC16	-	+	-	+		+	+					Putative adhesion molecule that mediates sialic-acid dependent binding to cells.
CD331	FGFR1	FGF											+	Receptor for basic fibroblast growth factor.
CD332	FGFR2	FGF											+	Receptor for acidic and basic fibroblast growth factors.
CD333	FGFR3	FGF											+	Receptor for acidic and basic fibroblast growth factors that referentially bind FGF1.
CD334	FGFR4	Acidic FGF											+	Receptor for acidic fibroblast growth factor. Does not bind to basic fibroblast growth factor.
CD335	NKp46, NCR1, Ly94	HA, CD3z, FCERIG				+								Cytotoxicity-activating receptor that may contribute to the increased efficiency of activated natural killer (NK) cells to mediate tumor cell lysis
CD336	NKp44, NCR2, Ly95	DAP12				+								Cytotoxicity-activating receptor that may contribute to the increased efficiency of activated natural killer (NK) cells to mediate tumor cell lysis.
CD337	NKp30, NCR3	Viral proteins, CD3z				+								Cytotoxicity-activating receptor that may contribute to the increased efficiency of activated natural killer (NK) cells to mediate tumor cell lysis.
CD338	ABCG2		-	+		-	+	+	-					Xenobiotic transporter that may play an important role in the exclusion of xenobiotics from the brain and cancer cells.
CD339	Jagged-1, JAG1	Notch 1, 2, 3											+	Ligand for multiple Notch receptors and involved in the mediation of Notch signaling. May be involved in cell-fate decisions during hematopoiesis.
CD340	ERB-B2, Neu, Her-2	EGFR											+	Binds tightly to other ligand-bound EGF receptor family members to form a heterodimer, stabilizing ligand binding and enhancing kinase-mediated activation of downstream signaling pathways.

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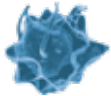












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<b>CD344</b>	FZD4, Frizzled homolog 4	MAGI3, Norrin					+					+	+	A receptor for Wnt proteins that plays an important role in retinal vascularization
<b>CD349</b>	FZD9, Frizzled homolog 9	Wnt-2					+							A receptor for Wnt proteins that may play a role in B cell development.
<b>CD350</b>	FZD10, Frizzled homolog 10	Wnt-7					+						+	A receptor for Wnt proteins that may play a role in lung and neural development
<b>CD351</b>	FCAMR, Fc receptor, IgA, IgM, high affinity	IgA, IgM	+	+	-	-		+	-					A high affinity receptor for Fc fragments IgA and IgM and mediates their endocytosis.
<b>CD352</b>	SLAMF6, Ly108, NTB-A	CD352, SH2D1A, SAPPTN6, PTN11	+	+	+	+		+	+					Triggers cytolytic activity only on NK cells expressing high surface densities of natural cytotoxicity receptors.
<b>CD353</b>	SLAMF8, BLAME		-	+	-	-		+	-					Regulates macrophage function; may play a role in B cell lineage commitment.
<b>CD354</b>	TREM1	TYROBP/DAP12	+	+	+	+		+	+					Stimulates neutrophil and monocyte-mediated inflammatory responses. Triggers release of pro-inflammatory chemokines and cytokines, as well as increased surface expression of cell activation markers. Amplifier of inflammatory responses that are triggered by bacterial and fungal infections and is a crucial mediator of septic shock.
<b>CD355</b>	CRTAM, Cytotoxic and regulatory T-cell molecule	CADM1	+	+	-	+		-	-					Interaction with CADM1 promotes natural killer (NK) cell cytotoxicity and interferon- $\gamma$ (IFN- $\gamma$ ) secretion by CD8+ cells in vitro as well as NK cell-mediated rejection of tumors expressing CADM3 in vivo.
<b>CD357</b>	TNFRSF18, Tumor necrosis factor receptor superfamily, member 18, GITR	TRAF1, TRAF2, TRAF3, SIVA1/SIVA, GITRL	+	+	+	+		+	-					GITR signaling on conventional T cells is believed to be an activator. In contrast activation of GITR on Tregs results in functional inactivation.
<b>CD358</b>	TNFRSF21, Tumor necrosis factor receptor superfamily, member 21, DR6	TRADD, N-APP	+	+	-	-		+	-					Involved in the activation of apoptosis.
<b>CD359</b>	PI16	MSMB	+	-		-		-	-					Serine protease inhibitor, potential suppressive activity. Initially identified as a serum binding partner of prostate secretory protein 94.
<b>CD360</b>	IL21R	IL-21, common $\gamma$ subunit, JAK1	+	+	-	+		+	+					Upon binding to IL-21, IL-21R has pleiotropic actions such as augmenting the proliferation of T cells, driving of B cells into memory cells, terminally differentiating plasma cells and augmenting the activity of natural killer cells
<b>CD361</b>	EVI2B (ectopoc viral integration site 2B)		+	+	+	+		+	+					
<b>CD362</b>	Syndecan-2	CD267 (TACI), FGF2, GM-CSF, TGF $\beta$	+	+	-	-		+	+					A cell surface heparan sulfate proteoglycan that functions as cell surface receptors in the regulation of adhesion-dependent signaling during cell adhesion and migration.
<b>CD363</b>	S1PR1, Sphingosine-1-phosphate receptor 1, EDG-1	SIP	+	+	-	+		-	-					Involved in the egress of newly formed T cells from the thymus and the exit of mature T and B cells from secondary lymphoid organs.

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		Key Markers - Human	Key Markers - Mouse
<b>T Cell</b>		CD3 CD4 CD8	CD3 CD4 CD8
<b>B Cell</b>		CD19 CD20	CD45R/B220 CD19 CD22 (B cell activation marker)
<b>Dendritic Cell</b>		CD11c CD123	CD11c CD123
<b>NK Cell</b>		CD56	CD335 (NKp46)
<b>Stem Cell/ Precursor</b>		CD34 <i>hematopoietic stem cell only</i>	CD34 <i>hematopoietic stem cell only</i>
<b>Macrophage/ Monocyte</b>		CD14 CD33	CD11b/ Mac-1 Ly-71 (F4/80)
<b>Granulocyte</b>		CD66b	CD66b Gr-1/Ly6G Ly6C
<b>Platelet</b>		CD41 CD61 CD62	CD41 CD61 (Integrin $\beta$ 3) CD9 CD62P (activated platelets)
<b>Erythrocyte</b>		CD235a	CD235a Ter-119
<b>Endothelial Cell</b>		CD146	CD146 MECA-32 CD106 CD31 CD62E (activated endothelial cells)
<b>Epithelial Cell</b>		CD236	CD326 (EPCAM1)



CD	Alternative Name	Ligands & Associated Molecules	T Cell	B Cell	Dendritic Cell	NK Cell	Stem Cell/Precursor	Macrophage/Monocyte	Granulocyte	Platelet	Erythrocyte	Endothelial Cell	Epithelial Cell	Function
<b>CD1d</b>	CD1.1, CD1.2, Ly-38	Lipid, Glycolipid Ag	+	+	+	+	+	+	+				+	Antigen presentation
<b>CD2</b>	LFA-2, Ly-37, Ly37	CD48, CD58, CD59, CD15	+	+		+	+	+						Activation/costimulation, adhesion
<b>CD3<math>\gamma</math></b>	CD3 $\gamma$ , CD3 $\gamma$ chain, T3 $\gamma$	TCR complex	+											Signal transduction
<b>CD3<math>\delta</math></b>	CD3 $\delta$ , CD3 $\delta$ chain, T3 $\delta$	TCR complex	+											Signal transduction
<b>CD3<math>\epsilon</math></b>	CD3 $\epsilon$ , CD3 $\epsilon$ chain, CD3, T3 $\epsilon$	TCR complex	+			+								Signal transduction
<b>CD4</b>	L3T4, Ly-4	MHC class II, HIV gp120, IL-16	+		+	+	+	+						Signal transduction, receptor/coreceptor
<b>CD5</b>	Ly-1, Lyt-1, Ly-12, Ly-A	CD72	+	+										Adhesion, regulates T-B lymphocyte interaction
<b>CD5.1</b>	Ly-1.1	CD72	+	+										Regulates T-B lymphocyte interaction
<b>CD6</b>	T12	CD166 (ALCAM), 3A11	+											Activation/costimulation, adhesion, differentiation/development
<b>CD7</b>	gp40		+	+		+	+							Immunoregulation, T costimulation
<b>CD8a</b>	Ly-2, Lyt-2, Ly-B, Ly-35	MHC class I	+		+									Signal transduction, receptor/coreceptor for MHC class I molecules
<b>CD8b</b>	Ly-3, Lyt-3, Ly-C, CD8b1	MHC class I	+											Signal transduction, receptor/coreceptor for MHC class I molecules
<b>CD8b.2</b>	Ly-3.2, Lyt-3.2	MHC class I	+											Signal transduction, receptor/coreceptor for MHC class I molecules
<b>CD9</b>	Tspan29	CD63, CD81, CD82, CD315, CD316	+	+	+		+	+	+	+				Adhesion and migration, platelet activation/costimulation, signal transduction
<b>CD10</b>	CALLA, MME, NEP	Peptides	+	+			+							Enzymatic activity, differentiation/development: regulates B cell growth
<b>CD11a</b>	Ly-15, Ly-21, Integrin $\alpha$ L	CD54, CD102, CD50	+	+	+	+		+	+					Adhesion, differentiation/development
<b>CD11b</b>	Integrin $\alpha$ M, Ly-40, CR3, CR3A, MAC1	CD54, iC3b, Fibronectin			+	+		+						Adhesion, chemotaxis, apoptosis
<b>CD11c</b>	ITGAX [Integrin $\alpha$ X], CR4 [complement receptor-4], iC3b receptor, Leu M5, p150,95, CD18/CD11c	iC3b, Fibronectin, ICAM-1	+		+	+	+	+	+					Adhesion, cell migration, survival, and proliferation
<b>CD13</b>	Aminopeptidase N, gp150	L-Leucyl- $\beta$ -naphthylamine			+			+				+	+	Enzymatic activity
<b>CD14</b>	Mo2, LPS Receptor	LPS/LPB complex, TLR2, TLR4			+			+	+					Receptor/coreceptor for LPS and LBP complex
<b>CD15</b>	SSEA-1, FAL, Lewis x	CD62					+		+					Adhesion, differentiation
<b>CD16</b>	Fc $\gamma$ RIII, Fc $\gamma$ RIIIa, Ly-17, FCGR3, IGF3	IgG Fc		+	+	+		+	+					Low affinity IgG Fc receptor III

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<b>CD18</b>	Integrin β2	CD11a, b, c	+	+	+	+		+	+	+	-	-	-	Signal transduction, adhesion
<b>CD19</b>	B4	CD21, CD81	-	+	+	-	+	-	-	-	-	-	-	Signal transduction, receptor/coreceptor
<b>CD20</b>	Ly-44, B1			+				+	+					B cell activation/costimulation, differentiation/development
<b>CD21</b>	CR2/CR1	C3d, EBV, CD23, CD19, CD81	+	+										Signal transduction
<b>CD22.2</b>	Lyb-8.2, Siglec-2	N-Glycolyl neuraminic acid		+										B cell adhesion, immunoregulation, receptor/coreceptor, signal transduction
<b>CD23</b>	FceRII, Ly-42	IgE, CD21, CD11b, CD11c		+	+									Regulates B cell activation
<b>CD24</b>	Heat Stable Antigen, Ly-52, Nectadrin	CD62P (P-Selectin)	+	+	+		+							T and B lymphocyte activation and differentiation, adhesion
<b>CD25</b>	Ly-43, IL-2 Receptor α chain, p55	IL-2 Receptor α	+	+	+			+						Activation/costimulation, receptor/coreceptor
<b>CD26</b>	Dipeptidyl peptidase, DPP IV, THAM	Polypeptides	+	+		+							+	Activation/costimulation, adhesion, enzymatic activity
<b>CD27</b>	T14, s152, tnfrs7, Tp55	CD70, TRAF2, TRAF5	+	+		+								Activation/costimulation, receptor/coreceptor
<b>CD28</b>	T90/44 antigen or Tp44	CD80 (B7-1), CD86 (B7-2)	+	-		+								T cell costimulation leading to proliferation, cytokine production and T cell activation
<b>CD29</b>	Integrin β1, VLA <sub>b</sub> , gp11a	VCAM-1, MAdCAM-1, ECM	+	+	+	+		+	+	+		+	+	Signal transduction, adhesion, differentiation/development
<b>CD30</b>	Ki-1	CD153	+	+		+		+						Immunoregulation, receptor/coreceptor, cytotoxicity
<b>CD31</b>	PECAM-1, gp11a, endoCAM, platelet endothelial cell adhesion molecule, PECA1	CD38, Vitronectin receptor	+	+		+		+	+	+	-	+		Cell adhesion, activation and migration
<b>CD32</b>	FcγRII, Ly-17, Ly-m20; Fc-γ receptor 2, Low affinity immunoglobulin γ Fc receptor II	IgG		+				+	+	+				Clearance of immune complexes by macrophages, B-cell antibody regulation
<b>CD33</b>	gp67; SIGLEC-3; Sialic acid-binding Ig-like lectin 3, myeloid cell surface antigen CD33	Sialylated glycoproteins; Sugar chains containing sialic acid; α-2,6-linked sialic acid	-	-	+	-	+	+	+	-	-	-	-	Cell adhesion
<b>CD34</b>	Mucosialin	CD62L (L-Selectin)	-	-	-	-	+	-	-	-	-	+		Cell adhesion
<b>CD35</b>	CR1, C3b receptor	C3b, C4b, iC3, iC4	+	+	+			+	+		+			Complement cascade regulation, mediates cellular binding of particles and immune complexes that have activated complement.
<b>CD36</b>	Scavenger receptor, FAT, GPIV, Scarb3	Oxidized LDL, Thrombospondin, Collagen			+		+	+		+	+	+		Adhesion, receptor/coreceptor, phagocytosis, cholesterol transport, scavenger receptor
<b>CD37</b>	gp52-40, Leukocyte antigen CD37, Tetraspanin-26, TSPAN26	CD53, CD81, CD82, MHC class II	+	+		-		+	+	-	-			Regulation of T cell/B cell interactions, development, activation, growth and motility.

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CD	Alternative Name	Ligands & Associated Molecules	T Cell	B Cell	Dendritic Cell	NK Cell	Stem Cell/Precursor	Macrophage/Monocyte	Granulocyte	Platelet	Erythrocyte	Endothelial Cell	Epithelial Cell	Function
<b>CD38</b>	ADP-ribosyl cyclase, T10, Cyclic ADP-ribose hydrolase 1	CD31, Hyaluronic acid, CD3/TcR complex, CD16, HLA Class II	+	+	+	+	+	+	-					Cell adhesion and signal transduction
<b>CD39</b>	NTPDase-1; Ectonucleoside triphosphate diphosphohydrolase 1 (ENTPD1), ATPdehydrogenase, NTPdehydrogenase-1	ATP, ADP		+	+	+		+		-		+	+	ADP and ATP hydrolysis, neurotransmission regulation
<b>CD40</b>	gp39 receptor, Bp50, MGC9013, TNFRSF5, Tumor necrosis factor receptor superfamily member 5	CD154	-	+	+	-	+	+	-		-	+	+	Cell adhesion, cell proliferation and signal transduction
<b>CD41</b>	GPIIb, Integrin $\alpha$ Ib, Platelet membrane glycoprotein IIb, ITGA2B, Integrin $\alpha$ 2b, Human Platelet Antigen-3 (HPA-3)	Fibronectin, Fibrinogen, von Willebrand factor, Thrombospondin	-	-	-	-	+	-	-	+	-	-	-	Cell adhesion, platelet aggregation
<b>CD42a</b>	GPIX, GP9, Platelet glycoprotein IX	von Willebrand factor	-	-	-	-	+	-	-	+	-	-	-	Platelet adhesion
<b>CD42b</b>	GPIb $\alpha$ , Platelet glycoprotein Ib $\alpha$	von Willebrand factor	-	-	-	-	+	-	-	+	-	-	-	Platelet adhesion
<b>CD42c</b>	GPIb $\beta$ , Platelet glycoprotein Ib $\beta$	von Willebrand factor	-	-	-	-	+	-	-	+	-	-	-	Platelet adhesion
<b>CD42d</b>	GPV, Platelet glycoprotein V	von Willebrand factor	-	-	-	-	+	-	-	+	-	-	-	Platelet adhesion
<b>CD43</b>	Ly-48, Sialophorin, Leukosialin, Galactoglycoprotein, SPN	CD54	+			+	+	+	+	+				Cell adhesion and T-cell activation
<b>CD44</b>	Ly-24, ECMRII, H-CAM, Pgp-1, Phagocytic glycoprotein I, Extracellular matrix receptor III, GP90 lymphocyte homing/adhesion receptor, Hyaluronate receptor	Hyaluronate, Collagen, Fibronectin, Laminin, Osteopontin	+	+		+		+	+		+	+	+	Cell adhesion and migration
<b>CD45</b>	Leukocyte Common Antigen (LCA)	CD150, Galectin-1, CD2, CD3, CD4, CD45AP, p56lck, p59fyn, Src kinases	+	+	+	+	+	+	+	-	-	-	-	Regulator of T- and B-cell antigen receptor signaling, regulator of cell growth and differentiation
<b>CD45.1</b>	Ly-5.1, Ly-5a, PTPRCa		+	+	+	+	+	+	+	-	-	-	-	Regulator of T- and B-cell antigen receptor signaling, regulator of cell growth and differentiation
<b>CD45.2</b>	Ly-5.2, Ly-5b, PTPRCb		+	+	+	+	+	+	+	-	-	-	-	Regulator of T- and B-cell antigen receptor signaling, regulator of cell growth and differentiation
<b>CD45R</b>	B220, Ly-5, Lyt-4, T200, Protein tyrosine phosphatase receptor type C (PTPRC)		+	+	+	+	+	+	-	-	-	-	-	Regulator of T- and B-cell antigen receptor signaling, regulator of cell growth and differentiation
<b>CD45RA</b>			+	+	+	+	+	+	-	-	-	-	-	

CD38 – CD45RA

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<b>CD45RB</b>			+	+	+	+	+	+	+	-	-	-	-	
<b>CD45RC</b>	Protein tyrosine phosphatase receptor type C (PTPRC)		+	+	+	+	+	+	-	-	-	-	-	
<b>CD45RO</b>			+	+	+	+	+	+	-	-	-	-	-	
<b>CD46</b>	Membrane Cofactor Protein (MCP), Trophoblast leukocyte common antigen, TRA2.10	C3b, C4b, Measles virus	+	+		+		+	+	+	-	+	+	Inhibitory complement receptor
<b>CD47</b>	Integrin-associated protein (IAP), OA3, Neuropilin, MER6, gp42	SIRP (CD172), CD61, Thrombospondin	+	+	+	+		+	+	+	+	+	+	Cell adhesion and signal transduction
<b>CD48</b>	Blast-1, Hulym3, BCM-1, OX-45, MEM-102	CD2, Ick, fyn, CD229, CD244	+	+		+	+	+						Lymphocyte adhesion and activation
<b>CD49a</b>	VLA-1 $\alpha$ , Integrin $\alpha$ 1	Collagen, Laminin	+	-		+		+	-	-	-	-	-	Cell adhesion
<b>CD49b</b>	VLA-2 $\alpha$ , Integrin $\alpha$ 2, gPIa	Collagen, Laminin, MMP-1	+	+		+	+	+	-	+	-	+	+	Cell adhesion
<b>CD49c</b>	VLA-3 $\alpha$ , Integrin $\alpha$ 3, GAPB3, Galactoprotein B3, MSK18, Very Common Antigen-2 (VCA-2)	Fibronectin, laminin, collagen	+	+		-		+			-	+	+	Cell adhesion
<b>CD49d</b>	VLA-4 $\alpha$ , Integrin $\alpha$ 4	CD106 (VCAM1), MAdCAM, Fibronectin, Paxillin	+	+	+	+	+	+	-	-	-	+		Cell adhesion and lymphocyte homing
<b>CD49e</b>	VLA-5 $\alpha$ , Integrin $\alpha$ 5, Fibronectin receptor	Fibronectin, Invasin, Fibrinogen	+		+	+	+	+		+	+	+	+	Cell adhesion
<b>CD49f</b>	VLA-6 $\alpha$ , Integrin $\alpha$ 6, gpl	Laminin, Invasin	+				+	+		+		+	+	Cell adhesion
<b>CD51</b>	Integrin $\alpha$ v, VNR- $\alpha$ , Vitronectin-R $\alpha$	Vitronectin, fibronectin, fibrinogen, thrombospondin, von Willebrand factor, CD31						+	-	+		+		Cell adhesion and signal transduction
<b>CD52</b>	CAMPATH-1, HE5, Epididymal secretory protein E52, CLS1, MB7, B7		+	+		+		+		-	-		+	Complement mediated cell lysis and antibody mediated cellular cytotoxicity
<b>CD53</b>	MOX44, TSPAN25, Tetraspanin-25	VLA-4, Integrins	+	+	-	+	+	+	+	-	-		-	Cell adhesion, activation and migration
<b>CD54</b>	ICAM-1, Ly-47, MALA-2	LFA-1, Mac-1, CD43, CD11a/CD18, CD11b/CD18, Rhinovirus, CD227	+	+				+				+		Cell adhesion, lymphocyte activation and migration
<b>CD55</b>	Decay accelerating factor (DAF), complement-glycosylphosphatidylinositol, Cromer blood group, Daf-GPI, Daf1, GPI-DAF	C3b, C4b, CD97, Echovirus	+	+		+	+	+	+	+	+	+	+	Complement cascade (C3bBb complex) regulation
<b>CD56</b>	Leu-19, NKH-1, Neural Cell Adhesion Molecule (NCAM)	NCAM-1, Heparin sulfate	+			+								Cell adhesion and neural plasticity

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<b>CD59</b>	1F5Ag, H19, protectin, MAC1F, M1RL, P-18	C8- $\alpha$ , C9, Ick, fyn	+			+		+	+		+			Complement cascade regulation
<b>CD61</b>	GP IIIa, Integrin $\beta$ 3	Fibrinogen, PTK2, ITGB3BP, TLN1 and C1B1						+		+		+		Cell adhesion
<b>CD62E</b>	E-Selectin, ELAM-1, LECAM-2	Sialyl Lewis x,a, CLA, CD162											+	Cell adhesion
<b>CD62L</b>	L-Selectin, LECAM-1, Lnhf, Ly-22, Ly-m22, Lyam-1, Lyam1	CD34, GlyCAM-1, MAdCAM-1	+	+		+		+	+					Cell adhesion
<b>CD62P</b>	P-Selectin, GMP-140, PADGEM	CD162, CD24								+			+	Cell adhesion
<b>CD63</b>	LIMP, MLA1, gp55, NGA, LAMP-3, ME491, OMA81H, TSPAN30, granulophysin, melanoma 1 antigen	VLA-3, VLA-6, CD81, CD9, PI4-kinase, CD117, CD82						+	+	+			+	Cell growth and motility regulation, complexes with integrins
<b>CD64</b>	Fc $\gamma$ RI, Fc- $\gamma$ receptor 1, High affinity immunoglobulin $\gamma$ Fc receptor I, Fc $\gamma$ RIA	IgG	-	-	+	-	+	+	+	-	-	-	-	Ig Fc receptor
<b>CD66a</b>	BGP, CEA-1				+				+	+				Signal transduction, adhesion, angiogenesis
<b>CD66b</b>	CGM6, CEA-3								+					Adhesion, neutrophil activation
<b>CD68</b>	Macrosialin lysosomal glycoprotein 110	LDL			+			+						Phagocytosis
<b>CD69</b>	Very Early Activation Antigen					+								Activation/costimulation, differentiation/development
<b>CD70</b>	CD27 Ligand	CD27	+	+										Activation/costimulation
<b>CD71</b>	Transferrin Receptor	Transferrin	+	+		+								Activation/costimulation, metabolism
<b>CD72</b>	Lyb-2, Ly-m19	CD5, CD100	+	+	+			+						Activation/costimulation, differentiation/development
<b>CD73</b>	NT, Ecto-5'-nucleotidase	NMP	+	+	+									Enzymatic activity
<b>CD74</b>	Ia-associated invariant chain (Ii)	CD44, MHC class II	+	+	+									Antigen presentation, differentiation/development
<b>CD77</b>	Pk blood group antigen; BLA; CTH; Gb3, $\alpha$ -1,4-Galactosyltransferase, Gb3 synthase, A4galt													
<b>CD79a</b>	Iga, mb-1, Ly-54	Ig, CD5, CD19, CD22, CD79b			+									Signal transduction, cell surface expression
<b>CD79b</b>	Igb, B29	Ig, CD5, CD19, CD22, CD79a			+									Signal transduction, cell surface expression, differentiation/development
<b>CD80</b>	B7/BB1, B7-1, Ly-53	CD28, CD152	+	+	+			+						Activation/costimulation, immunoregulation
<b>CD81</b>	TAPA-1	CD9, CD19, CD21, CD225, CD315, CD316	+	+	+	+		+						Activation/costimulation, adhesion, differentiation/development

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CD82 – CD101

CD	Alternative Name	Ligands & Associated Molecules	T Cell	B Cell	Dendritic Cell	NK Cell	Stem Cell/Precursor	Macrophage/Monocyte	Granulocyte	Platelet	Erythrocyte	Endothelial Cell	Epithelial Cell	Function
<b>CD82</b>	C33 Ag, KAI1	MHC molecules, CD4, CD8, CD20, CD37, CD81, Integrins								+				Activation/costimulation
<b>CD83</b>	HB15		+	+	+									Activation/costimulation
<b>CD84</b>	GR6	TLR4	+	+	+			+	+	+				Leukocyte activation
<b>CD86</b>	B7-2, B70, Ly-58	CD28, CD152	+	+	+			+				+		Activation/costimulation, immunoregulation
<b>CD87</b>	uPA Receptor	uPA, Vitronectin	+			+		+	+					Adhesion, receptor/coreceptor
<b>CD88</b>	C5a Ligand, C5aR	C5a			+			+	+					Activation/costimulation, complement pathways
<b>CD90</b>	Thy-1, q, T25		+		+	+		+						Signal transduction, activation/costimulation, adhesion, differentiation/development
<b>CD90.1</b>	Thy-1.1, q-AKR		+		+	+		+						Signal transduction, activation/costimulation, adhesion, differentiation/development
<b>CD90.2</b>	Thy-1.2, q-C3H		+		+	+		+						Signal transduction, activation/costimulation, adhesion, differentiation/development
<b>CD90.2</b>	LRP, A2MR, AI316852, $\alpha$ 2-Macroglobulin receptor	LDL, LRPAP1, $\alpha$ 2M						+						Antigen presentation, hemostasis, metabolism
<b>CD93</b>	AA4.1, C1qRp	CCL21						+				+		Potentially involved in angiogenesis, endothelial cell migration, and clearance of dying cells
<b>CD94</b>	KP43, kIrd1	Qa-1/Qdm	+			+	+							Antigen recognition, immunoregulation
<b>CD95</b>	Fas, APO-1	CD178 (Fas Ligand)	+	+	+			+			+			Apoptosis
<b>CD96</b>	Tactile	CD155, Nectin-1	+	+		+								Promotes NK cell adhesion to target cells
<b>CD97</b>	TM7LN1, TM7S	CD55	+	+	+	+		+			+			Neutrophil migration
<b>CD98</b>	4F2, Ly-10, RL-388	CD29, CD147, Tropomyosin, Actin	+	+		+								Activation/costimulation, immunoregulation
<b>CD99</b>	Paired immunoglobulin-like type 2 receptor-ligand	PILRB	+	+					+			+		T-cell recruitment to inflamed skin
<b>CD100</b>	Semaphorin H, coll-4, Semaphorin 4D, Sema 4D	CD72, Plexin-B1, CD45	+	+										Immunoregulation
<b>CD101</b>	IGSF2, V7		+		+			+	+					May be involved in Treg function

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<b>CD102</b>	ICAM-2, Ly-60	LFA-1, Mac-1	+	+	+			+		+				Mediates adhesive interactions important for antigen-specific immune response, NK-cell mediated clearance, lymphocyte recirculation, and other cellular interactions important for immune response and surveillance.
<b>CD103</b>	Integrin αEL	E-Cadherin	+											Likely important for T cell homing to the intestinal sites through its ligand αEb7.
<b>CD104</b>	Integrin β4	Laminin, Plectin	+											Adhesion
<b>CD105</b>	Endoglin	TGF-β					+	+						Adhesion, receptor/coreceptor
<b>CD106</b>	VCAM-1	VLA-4			+			+						Adhesion, differentiation/development
<b>CD107a</b>	LAMP-1	Collagen, Laminin, Fibronectin	+	+				+						Possibly adhesion, marker of degranulation on lymphocytes
<b>CD107b</b>	LAMP-2, LGP-96, LAMP-B		+					+						Cell adhesion
<b>CD108</b>	Sema7a	Tyrosine kinases	+											Possibly monocyte activation, possibly adhesion
<b>CD110</b>	Thrombopoietin, Receptor, c-mpl	JAK2, Thrombopoietin					+			+				Differentiation/development
<b>CD111</b>	PRR1, Nectin-1, CD111, CLPED1, ED4, HlgR, HVEC, MGC142031, MGC16207, OFC7, PRR, PVRR, PVRR1, SK-12	a-Herpesvirus, Nectin-3, Afadin,					+							Adhesion
<b>CD112</b>	PRR2, Nectin-2, PVRL2, HVEB, MPH, Pvr, Pvs, CD112, AI325026, AI987993, Nectin-2, Pvrl2	CD226, PRR3, afadin						+				+	+	Adhesion
<b>CD113</b>	PVRL3, Nectin-3	Nectin-1, Nectin-2, PVR										+		Adhesion
<b>CD114</b>	G-CSF Receptor, CSF3R, HG-CSFR, Granulocyte colony-stimulating factor receptor, G-CSFR	G-CSF, JAK1, JAK2					+		+					Signal transduction, differentiation/development, receptor/coreceptor
<b>CD115</b>	M-CSF Receptor, CSF-1R, c-fms, Fim-2	M-CSF					+	+						Signal transduction, differentiation/development, receptor/coreceptor
<b>CD116</b>	GM-CSF Receptor α chain	GM-CSF			+			+	+			+		Signal transduction, differentiation/development, receptor/coreceptor
<b>CD117</b>	c-kit, Steel factor receptor, Dominant white spotting	c-Kit Ligand (Steel, stem-cell, or mast-cell growth factor)	+	+	+	+	+	+	+					Signal transduction, differentiation/development, receptor/coreceptor
<b>CD118</b>	IFN-α/β Receptor, Type I IFN-R, IFN-α Receptor	IFN-α, IFN-β					+	+						Differentiation, LIF receptor/coreceptor, proliferation
<b>CD119</b>	IFN-γ Receptor α chain	IFN-γ	+	+	+	+		+	+			+	+	Immunoregulation, receptor/coreceptor
<b>CD120a</b>	TNFR1, TNF-R55	TNF, Lymphotoxin A (TNF-β)	+	+	+	+	+	+				+		Signal transduction, apoptosis, receptor/coreceptor

CD102 – CD120a

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+ Positive\* – Negative

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CD	Alternative Name	Ligands & Associated Molecules	T Cell	B Cell	Dendritic Cell	NK Cell	Stem Cell/Precursor	Macrophage/Monocyte	Granulocyte	Platelet	Erythrocyte	Endothelial Cell	Epithelial Cell	Function
<b>CD120b</b>	TNFR2, TNF-R75	TNF, Lymphotoxin A (TNF-β)	+	+	+	+	+	+	+			+		Signal transduction, apoptosis, necrosis, receptor/coreceptor
<b>CD121a</b>	IL-1 Receptor, Type I	IL-1α, IL-1β	+		+							+		Signal transduction, activation/costimulation, receptor/coreceptor
<b>CD121b</b>	IL-1 Receptor, Type II	IL-1α, IL-1β	+	+	+			+						Immunoregulation, receptor/coreceptor
<b>CD122</b>	IL-2 and IL-15 Receptor b chain	IL-2, IL-15	+	+		+		+						Signal transduction, immunoregulation, receptor/coreceptor
<b>CD123</b>	IL-3 Receptor α chain	IL-3			+		+	+	+			+		IL-3 receptor/coreceptor
<b>CD124</b>	IL-4 Receptor α chain	IL-4, IL-13	+	+	+				+		+		+	Signal transduction, receptor/coreceptor
<b>CD125</b>	IL-5 Receptor α chain	IL-5		+					+					Activation/costimulation, immunoregulation, receptor/coreceptor
<b>CD126</b>	IL-6 Receptor α chain	IL-6	+	+	+				+				+	Differentiation/development, immunoregulation, receptor/coreceptor
<b>CD127</b>	IL-7 Receptor α chain	IL-7	+	+				+						Signal transduction, differentiation/development, receptor/coreceptor
<b>CD130</b>	gp130, Common β chain	CD126, IL-11R, LIF-R	+	+	+	+					+	+		Signal transduction
<b>CD131</b>	AIC2A and AIC2B, bIL-2 and bc	IL-3 (AIC2A), CD123, CD125, CD116	+	+			+							Signal transduction, receptor/coreceptor
<b>CD132</b>	Common γ chain	Subunit of IL-2, IL-4, IL-7, IL-9, IL-15, IL-21 receptors	+	+	+			+						Signal transduction
<b>CD133</b>	AC133, Prominin-1 (PROM1)						+					+	+	Stem cell marker
<b>CD134</b>	Ly-70, OX-40 antigen, ACT35 antigen	OX-40 Ligand	+	+										Activation/costimulation
<b>CD135</b>	Flk-2, Flt3, Ly-72	flt3 Ligand	+	+	+			+			+			Differentiation/development, receptor/coreceptor
<b>CD136</b>	STK, Mst1r, RON, MSP Receptor	MSP, HGFI					+	+					+	Proliferation, anti-apoptosis
<b>CD137</b>	4-1BB, Ly-63, Tnfrsf9	4-1BBL, Fibronectin, Laminin, Vitronectin, Collagen VI	+	+	+	+		+					+	Antigen presentation, signal transduction, activation/costimulation, adhesion
<b>CD138</b>	Syndecan-1, Sdc1	Interstitial matrix proteins		+						+			+	Adhesion
<b>CD140a</b>	PDGF Receptor α chain, PDGFR-α	PDGF-A, PDGF-B, PDGF-C								+				Signal transduction, differentiation/development, receptor/coreceptor
<b>CD140b</b>	PDGF Receptor β chain, PDGFR-β	PDGF-B, PDGF-D												Signal transduction, differentiation/development, receptor/coreceptor
<b>CD141</b>	Thrombomodulin, TM	Thrombin						+		+		+		Hemostasis
<b>CD142</b>	Tissue Factor, Coagulation Factor III	Plasma Factor VII/VIIIa (FVII)						+		+		+	+	Differentiation/development, hemostasis, angiogenesis

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CD	Alternative Name	Ligands & Associated Molecules	T Cell	B Cell	Dendritic Cell	NK Cell	Stem Cell/Precursor	Macrophage/Monocyte	Granulocyte	Platelet	Erythrocyte	Endothelial Cell	Epithelial Cell	Function
<b>CD143</b>	Angiotensin converting enzyme, Dipeptidyl peptidase, ACE	Angiotensin I, Bradykinin			+			+				+	+	Enzymatic activity
<b>CD144</b>	VE-Cadherin, Cdh5, 7B4, VECD	CD144, $\beta$ Catenin					+					+		Adhesion, angiogenesis
<b>CD146</b>	MUC18, S-endo, Mcam		+		+							+		Adhesion
<b>CD147</b>	Basigin, HT7, Neurothelin, gp42, Neurothelin									+	+	+		Adhesion
<b>CD148</b>	PTPb2, ByP, Scc-1, RPTPJ		+	+	+			+	+	+		+		Signal transduction
<b>CD150</b>	IPO-3, ESTM51, Slam	Measles virus, CD45	+	+	+				+			+		Signal transduction
<b>CD151</b>	SFA-1, PETA-3, Tspan24	Integrin $\beta$ 1								+		+	+	Adhesion
<b>CD152</b>	CTLA-4, Ly-56	CD80, CD86	+	+										Immunoregulation
<b>CD153</b>	CD30 Ligand	CD30	+	+				+						Activation/costimulation, immunoregulation
<b>CD154</b>	gp39, CD40 Ligand, Ly-62, HIGM1, IMD3, T-BAM, Tnfsf5	CD40	+	+				+		+				Activation/costimulation
<b>CD155</b>	Polio virus receptor (pvr), Tage4	CD96, CD226, Nectin-3	+	+	+			+					+	Cell adhesion
<b>CD156a</b>	MS2, ADAM 8							+	+					Adhesion, enzymatic activity
<b>CD156b</b>	TACE, ADAM17	TNF- $\alpha$ , APP, CD62L	+	+	+			+	+	+		+	+	Adhesion, enzymatic activity, receptor/coreceptor
<b>CD156c</b>	ADAM10, Kuz, Kubanian, Madm	pro-TNF- $\alpha$ , APP, Notch												Adhesion, proliferation
<b>CD157</b>	Ly-65, BP-3; BST-1		+	+				+	+			+		Pre-B-cell growth
<b>CD159a</b>	NKG2A, NKG2B	Qa-1/Qdm, HLA-E	+			+								Antigen recognition, signal transduction
<b>CD159c</b>	NKG2C, KLRC2	HLA-E, CD94	+			+								NK cell activation
<b>CD160</b>	BY55	HLA-C	+			+								Costimulation
<b>CD161a</b>	NKR-P1A, Ly55a		+			+								NK cell-mediated cytotoxicity, proliferation
<b>CD161b</b>	NKR-P1B, Ly55b, Ly55d		+			+								NK cell-mediated cytotoxicity, proliferation
<b>CD161c</b>	NKR-P1C, NK-1.1, Ly-55c, Ly-59		+			+								NK cell-mediated cytotoxicity, proliferation
<b>CD162</b>	P-Selectin glycoprotein ligand (PSGL-1), P-Selectin-IgG fusion protein	CD62P, CD62L	+				+	+	+	+				Adhesion

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CD143 – CD162





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<b>CD163</b>	Scavenger receptor cysteine-rich type 1 protein M130	CSNK2B						+						Clearance of hemoglobin/haptoglobin complexes
<b>CD164</b>	MGC-24, A115, A24	CXCR4					+	+					+	Adhesion, proliferation, and differentiation of hematopoietic stem and progenitor cells
<b>CD166</b>	ALCAM, BEN, DM-Grasp, MuSC, SC1	CD6	+	+			+	+						Activation/costimulation, adhesion
<b>CD167a</b>	Cak, Nep, Ddr1	Collagen			+								+	Adhesion
<b>CD168</b>	RHAMM, Hmnr	CD44	+					+						Adhesion
<b>CD169</b>	Sialoadhesin, Siglec-1, Sn	CD43, CD162, CD227, CD206	+	+				+						Adhesion
<b>CD170</b>	Siglec-5, Siglecf, Siglec9	Ganglioside			+			+						Adhesion
<b>CD171</b>	L1, L1-NCAM, NCAM-L1, L1cam	L1, CD56, CD24	+	+	+			+						Adhesion
<b>CD172a</b>	SIRPa, SHPS-1, BIT, P84 Antigen, SIRP, SHP-1, Ptpns1, AI835480	CD47, PTPN11, CD22, PTPN6			+		+	+	+					Signal transduction, adhesion
<b>CD172b</b>	SIRPb1, 9930027N05Rik, Sirpb1a	DAPI2			+			+	+					Cell activation, phagocytosis
<b>CD176</b>	TF,HP, Tfn, hpx, AI266983, MGC102653, Trf	TFRC, Transferrin receptor												Iron transport
<b>CD177</b>	NB1, Pdp3, 1190003K14Rik		+			+		+	+			+		Possible role as a hematopoietic receptor molecule
<b>CD178</b>	CD95L, Fas Ligand, Tnfsf6; APT1LG1	CD95	+		+									Signal transduction, activation/costimulation, differentiation/development, apoptosis inducer
<b>CD178.1</b>	mFasL.1	CD95	+		+									Signal transduction, activation/costimulation, differentiation/development, apoptosis inducer
<b>CD179a</b>	VpreB, MGC151428, Vpreb1	IGLL1	+	+				+						Differentiation/development
<b>CD179b</b>	I5				+									Differentiation/development
<b>CD180</b>	RP105, Ly-78, F630107B15	LPS, LY86			+			+						Signal transduction
<b>CD181</b>	CXCR1, IL8Ra	MIP2, KC, (human IL-8)				+		+	+				+	Activation/costimulation, receptor/coreceptor
<b>CD182</b>	CXCR2, IL8Rb, CDw128, Cmkr2, Gpcr16	CXCL2, CXCL3, CXCL5, CXCL6, MIP2, KC, (human IL-8), GCP-2, LIX				+		+	+				+	Activation/costimulation, receptor/coreceptor
<b>CD183</b>	CXCR3, Cmkr3, gpr9	CXCL9, CXCL10, CXCL11, IP-10, CRG-2, 6Ckine, Mig, I-TAC	+	+		+		+						Receptor/coreceptor, chemotaxis

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<b>CD184</b>	CXCR4, Cmkar4, Fusin/LESTR	CXCL12, SDF-1, PBSF, HIV-1	+	+				+	+					Receptor/coreceptor, chemotaxis
<b>CD185</b>	CXCR5, BLR1, Gpcr6	CXCL13, BLC	+	+	+									Cell migration
<b>CD186</b>	CXCR6, BONZO, STRL33, BB217514	CXCL16, HIV-1, SIV	+	+	+	+								T cell recruitment, HIV-1 coreceptor
<b>CD191</b>	CCR1, MIP-1aR, Cmkbr1	CCL3, 5, 7, 8, 14, 15, 23, MIP-1a, RANTES, MRP2, CCF18, MIP-1g	+	+	+		+	+						HIV receptor/coreceptor, chemotaxis
<b>CD192</b>	CCR2, Ckr2, Ccr2a, Ccr2b, Ckr2a, Ckr2b, mJe-r, Cmkbr2, Cc-ckr-2	CCL2, 7, 8, 12, 13, 16, HIV-1, MCP-5	+	+	+			+						HIV receptor/coreceptor, chemotaxis
<b>CD193</b>	CCR3, MIP-1aRL2, CKR3, Cmkbr3, CC-CKR3, Cmkbr112, MGC124265, MGC124266, Ccr3	CCL3, 5, 7, 8, 11, 14, 15, 24, 26, HIV-1	+		+			+	+					HIV receptor/coreceptor, chemotaxis
<b>CD195</b>	CCR5, Cmkbr5, AM4-7	MIP-1a, MIP-1b, RANTES, MCP-1, HIV-1	+		+	+		+						HIV receptor/coreceptor, chemotaxis
<b>CD196</b>	CCR6, KY411, Cmkbr6, CC-CKR-6	CCL20, CCL19, b-Defensin, MIP-3a, LARC, Exodus-1	+	+	+									HIV receptor/coreceptor, cell migration
<b>CD197</b>	CCR7, EBI-1, BLR2, CMKBR7	CCL21, CCL19, SLC	+	+	+									Adhesion
<b>CDw198</b>	CCR8, TER1, CC-CKR-8, CKRL1, CMKBR8, CMKBRL2, CY6, GPRCY6, MGC129966, MGC129973	CCL1, vCCL1	+	+	+			+						HIV receptor/coreceptor, cell migration
<b>CDw199</b>	CCR9, CMKBR10, GPR-9-6; A130091K22Rik	CCL25, TECK												HIV receptor/coreceptor, cell migration
<b>CD200</b>	OX-2, Mox2	CD200 receptor (OX-2R)	+	+	+							+		Immunoregulation
<b>CD201</b>	CCD41, EPCR, Protein C Receptor, Ccca, A1325044, Procr	Protein C					+					+		Receptor/coreceptor, hemostasis
<b>CD202</b>	Endothelial-specific receptor tyrosine kinase, Tie2, Tek, Hyk, CD202b, RP23-345A23.1, AA517024	Angiopoietin					+					+		Differentiation/development
<b>CD203c</b>	Ly-41, PC-1, E-NPP1, Pca, ttw, twy, M6S1, NPP1, Npps	Extracellular nucleotides		+					+					Cleaves phosphodiester and phosphosulfate bonds
<b>CD204</b>	Macrophage scavenger receptor, MSR1, Scvr, SR-AII, Scara1	LPS, collagen, LDL, lipoproteins						+				+		Adhesion
<b>CD205</b>	DEC-205, Ly-75			+	+			+						Antigen presentation

CD184 – CD205

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<b>CD206</b>	Mannose receptor C type-1 (MRC1), MMR, CLEC13D	CD169 , CD45, Bacterial cell wall molecules, Viral glycoproteins, Yeast proteins, Chitin, Lyso-somal hydrolases, Plant glycoproteins, Neogly-coproteins, Lutropin, Chondroitin sulfate			+			+						Binds glycoproteins containing mannose, fucose, or N-acetylglucosamine, allowing endocytosis by macrophages. Promotes phagocytosis of viruses, bacteria, and fungi bearing mannose-containing glycoproteins.
<b>CD207</b>	Langerin, C-type lectin domain family 4 mem-ber K (CLEC4K)	Mannose-bearing glycoproteins, Glycolipids on microbial pathogens			+									Endocytic receptor that internalizes glycoprotein ligands into Birbeck granules. Required for Birbeck granule formation.
<b>CD208</b>	LAMP3, DC-LAMP, LAMP, TSC403, 1200002D17Rik				+									Transiently expressed in MHC class II-containing intracellular compartments within activated DC, suggesting a role in antigen processing.
<b>CD209a</b>	DC-SIGN, CDSIGN, CIRE, CD209 antigen-like protein A (CD209a), CLEC4L	CD50 (ICAM-3), CD102 (ICAM-2), Mannose-bearing glycoproteins on several pathogens including HIV gp120			+			+				+		Receptor for HIV-1 and other pathogens, promotes pathogen endocytosis and degradation. Interaction with CD102 enables DC migration into tissues. Interaction with CD50 promotes T cell proliferation.
<b>CDw210a</b>	IL-10RA , IL-10R1	IL-10, CDw210b	+	+	+	+		+						Signals through CDw210 are associated with immunosuppression and myeloid progenitor survival.
<b>CDw210b</b>	IL-10RB, IL-10R2	IL-22, IL-28, IL-29, CDw210a, IL-22RA1, IL-28R1, IL-29R1	+	+	+	+		+						Signals through CDw210 are associated with immunosuppression and myeloid progenitor survival.
<b>CD212</b>	IL-12β1, IL-12β, CD212b1	IL-12, IL-23, IL-12Rβ2, IL-23R	+	+	+	+		+						Dimerizes with IL-12Rβ2 to form high-affinity IL-12 receptor, promoting cell-mediated and Th1 immunity. Combines with IL-23R to form IL-23 receptor, promoting Th17 immunity.
<b>CD213a1</b>	IL-13Rα1, NR4	IL-13, IL-4, IL-4Rα		+	+			+	+				+	Associates with IL-4Rα to form the IL-13 receptor, regulating inflammation and supporting B cell activity. Also involved in the type II IL-4 receptor system.
<b>CD213a2</b>	IL-13Rα2, Interleukin-13-binding protein (IL13BP)	IL-13		+	+			+					+	Functions as a decoy receptor for IL-13, binding with high affinity but unable to induce a signal. Reduces the biological effects of IL-13.
<b>CD217</b>	Interleukin 17 receptor A (IL-17RA), IL-17R, CDw217	IL-17A, IL-17F, IL-17RC, IL-17RB	+	+	+	+	+	+	+			+	+	Associates with IL-17RC to form receptors for IL-17A, IL-17F, and IL-17A/F heterodimers, promoting inflammatory responses. Associates with IL-17RB to form the receptor for IL-17E (IL-25), suppressing Th17 responses and promot-ing Th2 responses.
<b>CD218a</b>	IL-18R1) IL-18RA, IL-18Rα, IL1 receptor-related protein (IL-1Rrp), IL-R5	IL-18, IL-18Rβ	+	+	+	+			+			+		Associates with IL-18Rβ to form high-affinity IL-18 receptor, promoting inflam-matory Th1 and Th2 responses.
<b>CD218b</b>	IL-18Rβ, IL-18 receptor accessory protein (IL-18RAP, IL-18RAcP), IL-1R accessory protein-like (IL-1RAcPL), IL-1R7, CDw218b	Associates with IL-18Rα to form high-affinity IL-18 receptor	+		+	+		+	+			+		Associates with IL-18Rβ to form high-affinity IL-18 receptor, promoting inflam-matory Th1 and Th2 responses.
<b>CD220</b>	Insulin receptor (INSR), IR	Insulin, IGF-2	+	+	+	+	+	+	+			+	+	Insulin receptor. Causes internalization and degradation of insulin and stimu-lates glucose uptake.

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<b>CD221</b>	Insulin-like growth factor 1 receptor (IGF1R), IGF-1R, type I IGF receptor (IGF-IR), JTK13	Insulin-like growth factor 1 (IGF-I), IGF-II, Insulin	+	+	+	+	+	+	+			+	+	Receptor for IGF-I and IGF-II. Mediates mitogenic and anti-apoptotic signals.
<b>CD222</b>	Cation-independent mannose-6-phosphate receptor (M6P-R, CIM6PR, CIMPR, CI-MPR), Insulin-like growth factor 2 receptor (IGF2R, IGFIR, IGF-IIR), MPR1, MPRI	IGF-II, TGF- $\beta$ latency-associated peptide (LAP), Proliferin, Prorenin, Plasminogen, Leukemia inhibitory factor (LIF), Herpes simplex virus, Thyroglobulin, Retinoic acid, Cathepsin B, D, L, CD87	+	+	+	+	+	+	+			+	+	Internalizes various extracellular ligands and directs them to lysosomes. Associates with CD87 to activate latent TGF- $\beta$ . Binding IGF-II stimulates insulin secretion. Mediates proliferin-induced angiogenesis.
<b>CD223</b>	Lymphocyte activation gene 3 (LAG3, LAG-3), FDC protein, Ly-66	MHC class II, TCR-CD3 complex	+	-	-	+								Binds MHC class II with high affinity and regulates homeostatic expansion of T cells through association with TCR-CD3 complex. Allows activated T cells to fully activate monocytes and dendritic cells.
<b>CD224</b>	$\gamma$ -glutamyltransferase 1 (GGT1), $\gamma$ -glutamyl transpeptidase 1 (GGTP), GGT, GTG, EC2.3.2.2	Glutathione, GSH, Leukotriene C4, GSNO	+	+			+	+	+			+		Protects cells from oxidative stress by participating in g-glutamyl cycle.
<b>CD225</b>	Interferon-induced transmembrane protein 1 (IFITM1), IFI17, Interferon-inducible protein 9-27 (9-27), Leu13, Frailis2	CD21, CD19, TAPA-1, CD81	+	+		+	+					+		Expression is induced by IFN- $\alpha$ and IFN- $\gamma$ . Component of the CD21/CD19/TAPA-1 complex, which is involved in B-cell activation.
<b>CD226</b>	DNAX accessory molecule 1 (DNAM-1), Platelet and T cell activation antigen 1 (PTA-1), T lineage-specific activation antigen 1 antigen (TLISA1)	CD112, CD155, LFA-1	+	+		+	+	+	-	+	-		-	Involved in platelet adhesion and activation, megakaryocyte adhesion and maturation, and adhesion of cytotoxic T and NK cells to target cells. Important for tumor immunosurveillance.
<b>CD227</b>	Mucin 1 (MUC1, MUC-1), DF3 antigen, H23 antigen, PUM, PEM, EMA, Tumor-associated mucin, Episialin	CD54, CD169, Selectins; Grb2, $\delta$ -Catenin, GSK-3 $\beta$	+	+	+		+	+					+	Involved in cell-cell interactions and adhesion. May confer cell surface protection by protruding from cell surface. Cytoplasmic tail is involved in many cell signaling pathways.
<b>CD228</b>	Melanotransferrin (MT, MTF1), p97 Melanoma antigen (p97, MAP97), Mfi2, gp95	Iron, Plasminogen, pro-UPA					+					+		Presumed role in iron transport based on high affinity binding or iron. Influences migration of endothelial and melanoma cells.
<b>CD229</b>	Lymphocyte antigen 9 (Ly9), T-Lymphocyte surface antigen Ly-9, SLAMF3, Lgp100, T100	CD229, SAP, Grb2	+	+		+	+	-	-	-	-			Homophilic binding may promote T cell/B cell adhesion. Promotes Th2 polarization and T-cell activation.
<b>CD229.1</b>	Lgp-100, Ly-9.1		+	+				+	+		+			Adhesion, lymphocyte differentiation
<b>CD230</b>	Prion Protein (PrP, PRNP), Major prion protein, prP27-30, prP33-35C, PrPc	CD230 (homophilic binding); N-CAM (CD56)	+	+	+	+	+	+	+			+	+	Implicated in copper binding, oxidative stress homeostasis, cell survival, and signal transduction. Abnormal isoform PrPsc causes neuropathology.
<b>CD231</b>	Tetraspanin 7 (TSPAN7), T-cell acute lymphoblastic leukemia-associated antigen 1 (TALLA-1), TM4SF2, Membrane component X chromosome surface marker-1 (MXS1), A15		T-ALL											Neuronal function. Marker for T-cell acute lymphoblastic leukemia (T-ALL).

CD221 – CD231

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<b>CD232</b>	Plexin C1 (PLXNC1), Virus-encoded semaphorin protein receptor (VESPR, VESP-R)	Semaphorin 7A (CD108), poxvirus semaphorin A39R		+	+	+		+	+					May be involved in promoting DC adhesion and migration. Cytoskeletal rearrangement and secretion of IL-6 and IL-18.
<b>CD233</b>	Solute carrier family 4 anion exchanger member 1 (SLC4A1), Band 3, Anion exchanger 1 (AE1), Diego blood group, EPB3	Glycophorin A, Ankyrin, Hemoglobin, Multiple glycolytic enzymes	-	-	-	-		-	-		+			Mediates anion exchange and bicarbonate export in erythrocytes and kidney cells. Links red cell cytoskeleton to membrane.
<b>CD234</b>	Duffy antigen/chemokine receptor (DARC), Dfy, FY, Fy-glycoprotein, Glycoprotein D	CXCL1 (MGSA), CXCL8 (IL-8), CCL2 (MCP-1), CCL5 (RANTES), Malarial parasites Plasmodium knowlesi and P. vivax	-	-	-	-		-	-		+	+	+	Binds and internalizes several chemokines, modulating levels in blood by acting as both a sink and a reservoir. Receptor allowing malarial parasite entry into erythrocytes.
<b>CD235a</b>	Glycophorin A (GYPA), Sialoglycoprotein $\alpha$ , Sialoglycoprotein A, MNS blood group antigen, PAS-2	CD170, Influenza virus, Plasmodium falciparum erythrocyte binding antigen EBA-175	-	-	-	-	+	-	-		+			Major sialoglycoprotein of the erythrocyte membrane. Contains the M/N blood group antigens. Prevents agglutination. Receptor allowing parasite entry into erythrocytes.
<b>CD236R</b>	Glycophorin C (GYPC), Gerbich blood group antigen	Plasmodium falciparum erythrocyte binding protein 2 (PfEBP-2), p55, 4.1					+				+			Interacts with p55 and band 4.1 to maintain mechanical stability and deformability in erythrocytes. Receptor allowing parasite entry into erythrocytes.
<b>CD238</b>	Kell blood group glycoprotein (Kel), endothelin-3-converting enzyme (ECE3)	Big Endothelin-3 (intermediate precursor of endothelin-3)					+				+			Zinc endopeptidase that cleaves endothelin-3 to its active form.
<b>CD239</b>	Basal cell adhesion molecule (BCAM, B-CAM), Lutheran blood group glycoprotein, Lu	$\alpha$ 5 chain of Laminin 10/11									+	+	+	Potentially involved in epithelial cell cancer and in vaso-occlusion by red blood cells in sickle cell disease.
<b>CD240</b>	Rh blood group system, CD240D (Rh30D, D blood antigen)	CD241, CD242, CD47, CD235b					+				+			May help maintain erythrocyte mechanical properties by associating with cytoskeletal ankyrin-R.
<b>CD241</b>	RHAG, Rh50, Rh-associated glycoprotein	ANK1									+			Metabolism
<b>CD242</b>	ICAM-4, LW blood group	CD11a, b, CD18, CD49b, d, e												Adhesion
<b>CD243</b>	P-gp; Pgy1, Mdr1, Abcb1	Cancer drugs, Xenobiotics												Involved in multidrug resistance as well as antigen presentation
<b>CD244</b>	2B4, C9.1, Ly90, NAIL, Nmrk, NKR2B4, SLAMF4	CD48			+	+								Signal transduction
<b>CD246</b>	Alk													Plays an important role in the development of the brain and exerts its effects on specific neurons in the nervous system
<b>CD247</b>	CD3 $\zeta$ , CD3 $\zeta$ chain	Janus kinase 3, Protein unc-119 homolog	+											Plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways.
<b>CD248</b>	TEM1, Endosialin													Angiogenesis
<b>CD249</b>	APA, Bp-1/6C3, Ly-51, Ly51			+	+	+						+	+	May be involved in B cell proliferation

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CD	Alternative Name	Ligands & Associated Molecules	T Cell	B Cell	Dendritic Cell	NK Cell	Stem Cell/Precursor	Macrophage/Monocyte	Granulocyte	Platelet	Erythrocyte	Endothelial Cell	Epithelial Cell	Function
<b>CD252</b>	OX-40 Ligand, gp34, TNFSF4	OX-40, CD134		+	+									Costimulation
<b>CD253</b>	TRAIL, APO-2L, TL2, Ly81, Trail, APO-2L, Tnfsf10	TNFRSF10B						+						Apoptosis
<b>CD254</b>	ODF, OPG, OPGL, RANKL, Trance, Tnfsf11	RANK, OPG	+											Bone development; T cell, B cell, and dendritic cell interactions
<b>CD256</b>	APRIL, TALL2, TRDL1, Tnfsf13	TACI, BCMA						+						B cell development
<b>CD257</b>	BlyS, BAFF, TALL-1, TNFSF13B, TNFSF20	TACI, BAMA, BAFF-R		+										A potent B cell activator which also play an important role in proliferation and differentiation of B cells
<b>CD258</b>	LTg, HVEM, LIGHT, TR2, HVEM-L, Tnfsf14	HVEM, LTbR, Tnsrsf14												A costimulatory factor for the activation of lymphoid cells and acts as a deterrent to infection by herpesvirus
<b>CD261</b>	APO2, CD261, DR4, MGC9365, TRAILR-1, TRAILR1 Tnfsf10a	DAP3												Transduces cell death signals and induces cell apoptosis
<b>CD262</b>	TRAIL-R2, Apo2, DR5, TRICK2, KILLER	CD253												Apoptosis inducer
<b>CD265</b>	RANK, TRANCE-R, ODFR, Tnfsf11a	RANK ligand, OPGL, CD254			+									Osteoclastogenesis and T cell/dendritic cell interactions
<b>CD266</b>	TWEAK Receptor, Fn14, Tnfsf12a	TWEAK (CD255)												Cell death and proliferation, angiogenesis and inflammation
<b>CD267</b>	TACI, Tnfsf13b	BAFF, APRIL		+										Controls T cell-independent B cell antibody responses, isotype switching, and B cell homeostasis
<b>CD268</b>	BAFFR, Tnfsf13c	BAFF		+										The principal receptor required for BAFF-mediated mature B-cell survival
<b>CD269</b>	BCMA, BCM, Tnfsf17	TNFSF13B/TALL-1/BAFF		+										B cell development and autoimmune responses
<b>CD271</b>	NGFR, Bex3, Ngfrap1p75, LNGFR, p75NTR, p75NGFR, Tnfsf16	NGF, BDNF, NT-3		+				+						Apoptosis, receptor for NGF
<b>CD272</b>	BTLA, B- and T Lymphocytes, MGC124217, MGC124218, A630002H24	HVEM	+	+	+	+		+						T and NKT cell inhibition
<b>CD273</b>	B7DC, PD-L2, Btdc, PD-L2, MGC124039, MGC124040, F730015O22Rik, Pdcd1lg2	PD1 (CD279)	+		+			+						Costimulation, inhibition
<b>CD274</b>	B7-H1, PD-L1, Pdcd1I1, Pdcd1lg1, A530045L-16Rik	CD279	+	+	+	+		+					+	Costimulation, inhibition

CD252 – CD274

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<b>CD275</b>	B7-H2, GL50, B7RP-1, B7h, GI50, LICOS, B7RP-1, GL50-B, ICOS-L, Icoslg, Ly115l, AU044799, BG071784, KIAA0653, mKIAA0653, Icosl	CD278		+	+			+						Costimulation
<b>CD276</b>	B7h3, B7RP-2, AU016588, 6030411F23Rik	CD26, CD152, TLF-2	+	+	+	+		+					+	Possibly costimulation or inhibition
<b>CD278</b>	ICOS, Ly115, H4, AILIM	CD275	+											T cell development
<b>CD279</b>	PD-1, Programmed death-1, Pdc1, Ly101	CD274, CD273	+	+										T cell tolerance
<b>CD280</b>	ENDO180, MRC2, UPARAP, MGC141530, mKIAA0709	Collagen, uPAR						+				+		Cellular matrix degradation
<b>CD281</b>	TLR1	Lipoproteins, TLR2			+			+						TLR2 regulator
<b>CD282</b>	TLR2, Ly105	Lipoproteins, Glycans, TLR1, TLR6	+		+			+	+					Immune response to gram-positive bacteria and mycobacteria
<b>CD283</b>	TLR3, AI957183	dsRNA			+				+				+	Immune response to ds RNA from viral pathogens
<b>CD284</b>	TLR4, Ly87, Ran/M1, Rasl2-8	Lipopolysaccharides, MD2, CD14												Immune response to gram-negative bacteria
<b>CD286</b>	TLR6	MyD88, TRAF6						+	+			+		Immune response to gram-positive bacteria and fungi
<b>CD288</b>	TLR8	MyD88, UNC93B1, poly(A)/T rich DNA		+	+			+						Regulation of TLR7 and prevention of spontaneous autoimmunity
<b>CD289</b>	TLR9	CpG DNA		+	+			+						Immune response to bacteria or virus
<b>CD292</b>	BMPR1A, ALK3, SKR5, ALK3, Bmpr, AU045487, 1110037122Rik	BMP2, 4, 7, GDF-5												Embryogenesis, kinase, regulates hair morphogenesis
<b>CDw293</b>	BMPR1B, ALK6, SKR6, Acvrlk6, CFK-43a, AI385617, AV355320	BMP2, 4, 7, GDF-5												Regulates cartilage formation, kinase
<b>CD294</b>	CRTH2, GPR44, Grp45, MGC130436	PGD2	+						+					Th2 cell inducer, regulates immune and inflammatory response
<b>CD295</b>	LeptinR, LEPR, db, Obr, obl, Modb1, LEPROT, OB-RGRP, MGC105189, obese-like	Leptin					+							Anti-apoptosis, regulates fat metabolism, proliferation
<b>CD296</b>	ART1, RT6, ART2, ADPRT, Yac-1	PDGFb, Integrins, Defensin												Cell metabolism regulator
<b>CD297</b>	ART4, Dombrock blood group, DO, DOK1, 4432404K01Rik		+											Cell metabolism regulator
<b>CD298</b>	Na <sup>+</sup> /K <sup>+</sup> -ATPase b3 subunit, AA409958, AI664000, AW212096, Atp1b3		+	+	+			+	+		+	+		Ion transport

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<b>CD301a</b>	Clec10a, Mgl, Mgl1				+			+						Binds and internalizes molecules with terminal nonsialylated GalNAc carbohydrates
<b>CD302</b>	Clec13A, DCL-1				+			+						Cell adhesion and migration, apoptosis and phagocytosis
<b>CD304</b>	BDCA4, Neuropilin 1, NP-1	VEGF165, SEMA3A	+		+							+		Angiogenesis, dendritic cell and T cell interactions
<b>CD305</b>	LAIR1	Ep-CAM, CD326	+	+	+	+		+						Inhibits cellular activation and inflammation
<b>CD307</b>	Fcrl5 Fc receptor-like 5, Fcrh3, mBXMH2, Fcrl5		+											May inhibit BCR mediated signaling
<b>CD309</b>	VEGFR2, Flk-1, KDR	VEGF-A, C, D, E					+					+		Angiogenesis
<b>CD314</b>	NKG2D, KLRK1	MICA, MICB, H60, ULBPs	+		+	+								NK cell activation
<b>CD315</b>	CD9P1	CD9, CD81		+				+					+	May play a role in cell migration
<b>CD316</b>	EWI2, PGRL, KASP	CD9, CD81	+	+		+						+	+	Cell migration
<b>CD317</b>	BST2		+											Possibly plays a role in pre-B cell growth
<b>CD318</b>	CDCP1	CDH2/N-Cadherin, CDH3/P-Cadherin, SDC1/Syndecan-1, SDC4/Syndecan-4, ST14/MT-SP1					+							May modulated cell adhesion
<b>CD319</b>	CRACC, SLAMF7	CS1	+	+	+	+								NK cell cytotoxicity
<b>CD320</b>	Transcobalamin receptor				+			+						Supports B cell proliferation and plasma cell differentiation
<b>CD321</b>	JAM1, F11 receptor, KAR	PAR3, LFA-1, Reovirus	+	+		+				+	+		+	Platelet aggregation
<b>CD322</b>	JAM2, VE-JAM	PAR3, JAM3	+					+						Lymphocyte migration
<b>CD324</b>	E-Cadherin, Uvomorulin	CD103, Catenins, PS1, Internalin								+			+	Adhesion, tumor suppression, cell growth and differentiation
<b>CD325</b>	N-Cadherin, Cadherin-2	Catenins, FGFR, PS1					+							Cell adhesion
<b>CD326</b>	Ep-CAM, Ly-74	LAIR-1, LAIR-2	+		+								+	Cell adhesion
<b>CD329</b>	siglec9	GD1a, LSTc	+	+	+	+		+	+					Regulator of immune response
<b>CD331</b>	FGFR1, FLT2, N-SAM	aFGF, bFGF, K-FGF, SHB, KLB, GRB10											+	Limb induction, carnoskeletal
<b>CD332</b>	FGFR2, KGFR, KSAM	aFGF, bFGF, K-FGF, FGF-6											+	Limb induction, carnoskeletal
<b>CD333</b>	FGFR3, ACH, CEK2	aFGF											+	Bone development and maintenance

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<b>CD334</b>	FGFR4, TKF	aFGF, FGF20	+	+				+					+	Cancer, muscle development
<b>CD335</b>	NKp46, Ly-94	Viral hemagglutinins, Heparan sulfate proteoglycans				+								NK cell activation
<b>CD338</b>	ABCG2, Mxr, ABC15, BCRP1	Xenobiotics					+				+			Xenobiotic transporter, may play a role in multi-drug resistance
<b>CD339</b>	Jagged-1, Serrate1	Notch 1, 2, 3											+	Hematopoiesis, cardiovascular development
<b>CD340</b>	c-erbB2, HER2, Neu	PRKCABP, PLXNB1, EGFR, PIK3C2A, MUC1											+	Enhancing kinase-mediated activation of EGFR downstream signaling pathways.
<b>CD344</b>	FZD4, Frizzled homolog 4	MAGI3, NDP					+					+	+	Receptor for Wnt proteins
<b>CD349</b>	FZD9, Frizzled homolog 9						+							Receptor for Wnt proteins
<b>CD350</b>	FZD10, Frizzled homolog 10						+						+	Receptor for Wnt proteins
<b>CD351</b>	FCAMR, Fc receptor, IgA, IgM, high affinity			+	+									Potentially involved in suppression of humoral responses against T-independent antigens
<b>CD352</b>	Ly-108, SLAMF6	PTN6, PTN11, SH2D1A/SAP	+	+										Expansion and differentiation of NKT lineage
<b>CD353</b>	SLAMF8, BLAME			+	+			+						May be important for B-cell lineage commitment and BCR signaling
<b>CD354</b>	TREM1	DAP12, TLR						+	+					Synergizes with effects of TLR ligands to amplify the synthesis of inflammatory cytokines
<b>CD355</b>	CRTAM	CADM1	+			+							+	Proposed to regulate retention of CD8 <sup>+</sup> T cells within the lymph node
<b>CD357</b>	TNFRSF18, Tumor necrosis factor receptor superfamily, member 18, GITR	GITRL	+	+	+			+						Important for regulatory T cell function
<b>CD358</b>	TNFRSF21, Tumor necrosis factor receptor superfamily, member 21, DR6	TRADD, N-APP	+	+				+						Regulation of T-cell mediated immune response
<b>CD360</b>	IL21R	Common $\gamma$ -chain, IL-21, Jak-1, Jak-3, STAT1, STAT3, STAT5	+	+										NK cell expansion
<b>CD361</b>	EVI2B (ectopic viral integration site 2B)		+	+	+	+		+	+					
<b>CD362</b>	Syndecan-2, Hspg1, Synd2		+	+				+	+					Cell adhesion
<b>CD363</b>	S1PR1, Sphingosine-1-phosphate receptor 1, EDG-1	Sphingosine-1-phosphate	+	+								+	+	Regulation of cell migration and possible endothelial cell differentiation

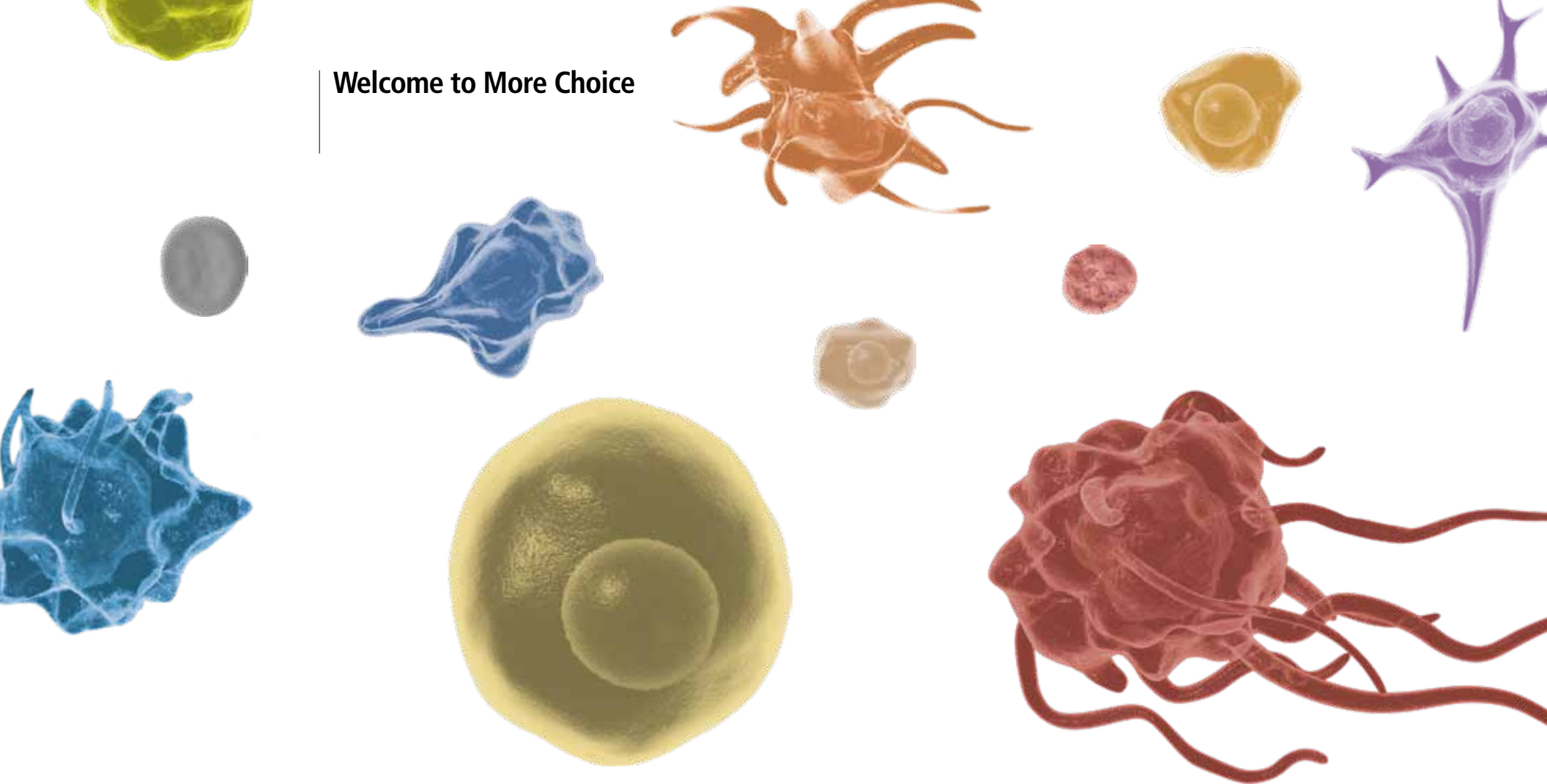
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