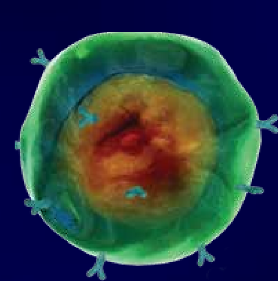
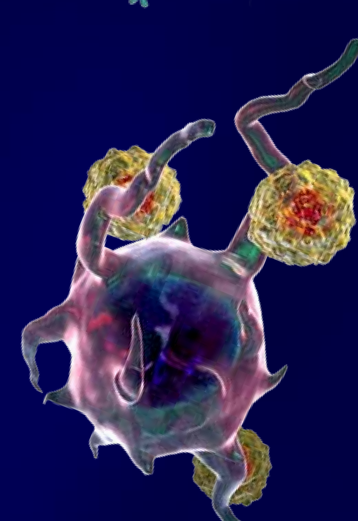
# Human CD Antigens



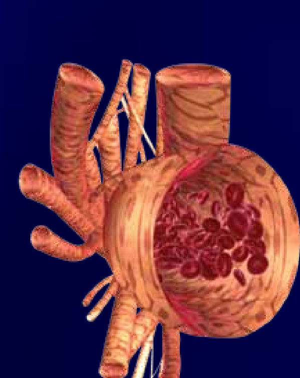
## B Cell Antigens

CD5, CD19, CD20, CD22, CD23, CD25, CD40, CD69, CD70, CD79a, CD79b, CD80, CD86, CD137 (4-1BB), CD138 (Syndecan), CD252, CD268



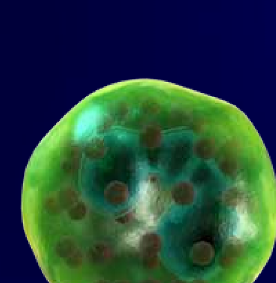
## Dendritic Cell Antigens

CD1a, CD1b, CD1c, CD11c, CD14, CD40, CD49d, CD80, CD83, CD85g (ILT7)$^{pDC}$, CD86, CD123$^{pDC}$, CD197 (CCR7), CD205 (DEC-205), CD207 (Langerin), CD209 (DC-SIGN), CD273 (B7-DC), CD289 (TLR9), CD303 (BDCA2), CD304 (BDCA4)



## Endothelial Cell Antigens

CD31 (PECAM-1), CD34, CD54, CD61, CD62E (E-Selectin), CD105 (Endoglin), CD106 (VCAM-1), CD144 (VE-Cadherin), CD146, CD202b (Tie2), CD309 (FLK1)

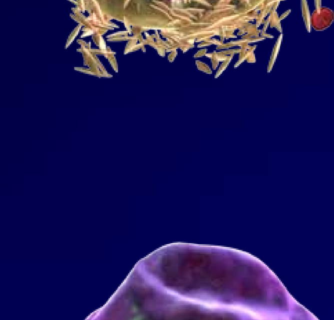


## Granulocyte Antigens

CD10, CD11b, CD11c, CD14$^{low}$, CD15, CD16b, CD31, CD33, CD66b, CD88, CD181 (CXCR1), CD182 (CXCR2), CD217 (IL-17RA)

## Macrophage/Monocyte Antigens

CD11a, CD11b, CD11c, CD14, CD15$^{low}$, CD33, CD64, CD68, CD80, CD85 (ILT) family, CD86, CD105 (Endoglin), CD115, CD163, CD195 (CCR5), CD282 (TLR2), CD284 (TLR4)



## Megakaryocyte/Platelet Antigens

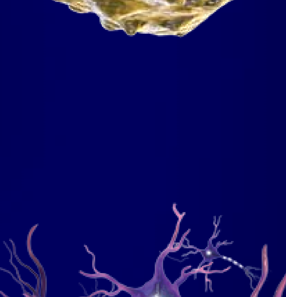
CD9, CD31 (PECAM-1), CD41, CD42b, CD51, CD61, CD62P (P-Selectin)

## NK Cell Antigens

CD11b, CD16a, CD25, CD56, CD57, CD69, CD94, CD122, CD158 (KIR) family, CD161, CD244, CD314 (NKG2D), CD319 (CRACC), CD328 (Siglec-7)

## Stem Cell Antigens

CD34, CD38$^{low}$, CD90, CD105 (Endoglin), CD110, CD111, CD117 (c-Kit), CD133, CD135 (Flt3), CD184 (CXCR4), CD202b (Tie1), CD243 (MDR1), CD309 (FLK1), CD338 (ABCG2)



## T Cell Antigens

CD2, CD3, CD4, CD5, CD7, CD8, CD25, CD27, CD28, CD39, CD45RA, CD45RO, CD62L (L-Selectin), CD69, CD73, CD101, CD127, CD134, CD137 (4-1BB), CD152, CD154, CD197 (CCR7), CD272 (BTLA), CD278 (ICOS), CD279 (PD-1)

## Other Cell-Type Antigens

**Epithelial Cell**: CD24, CD44R, CD49f, CD66a, CD75, CD104, CD121a, CD133, CD167a, CD326 (EpCAM)

**Erythrocyte**: CD45 negative, CD235a

**Fibroblast**: CD10, CD29, CD47, CD81, CD91, CD121a

**Mast Cell**: CD23, CD117, CD203c

**Neuron**: CD6, CD24, CD90, CD143, CD166, CD171, CD200, CD230 (Prion Protein), CD271 (NGFR), CD304 (Neuropilin)

**Stromal Cell**: CD10, CD34, CD157

| Antigen Name | Alternate Names | MW (kD) | Distribution | Function | Ligand/Receptor |
|---|---|---|---|---|---|
| CD1a | T6, Leu-6, R4, HTA1 | 49 | cortical thymocytes, Langerhans, DC | lipid and glycolipid antigen presentation, w/β2m | CD1 restricted TCR |
| CD1b | R1 | 45 | cortical thymocytes, Langerhans, DC | lipid and glycolipid antigen presentation, w/β2m | CD1 restricted TCR |
| CD1c | R7, M241 | 43 | cortical thymocytes, Langerhans, DC, B subset | lipid and glycolipid antigen presentation, w/β2m | CD1 restricted TCR |
| CD1d | R3 | 49 | cortical thymocytes, intestinal epithelial cells | lipid and glycolipid antigen presentation, w/β2m | CD1 restricted TCR |
| CD1e | R2 | 28 | DC (Golgi compartments, endosomes, and lysosomes) | lipid and glycolipid antigen presentation, w/β2m | |
| CD2 | T11, LFA-2, SRBC-R | 50 | thymocytes, T, NK, B | adhesion, T cell activation | CD58 |
| CD2R | T11-3 | 50 | T$^{act}$ | activation-dependent form of CD2 | |
| CD3δ | T3D | 20 | T, thymocyte subset | associates with TCR, TCR surface expression, signal transduction | |
| CD3ε | T3E, Leu-4 | 20 | T, thymocyte subset | associates with TCR, TCR surface expression, signal transduction | |
| CD3γ | T3G | 25 | T, thymocyte subset | associates with TCR, TCR surface expression, signal transduction | |
| CD4 | T4, Leu-3a | 55 | thymocyte subset, T subset, monocyte | T cell differentiation, activation | MHC class II, HIV |
| CD5 | T1, Tp67, Leu-1 | 67 | thymocytes, T, B subset, B-CLL | TCR or BCR signaling, T-B interaction | CD72 |
| CD6 | T12 | 100-130 | thymocytes, T, B subset | T cell differentiation, costimulation | CD166 |
| CD7 | Leu-9, gp40 | 40 | hematopoietic progenitors, thymocytes, T, NK, T-ALL | T costimulation | |
| CD8α | T8, Leu-2 | 32-34 | thymocyte subset, T subset, NK | T cell differentiation, activation | MHC class I |
| CD8β | Leu-2 | 30-32 | thymocyte subset, T subset | T cell differentiation, activation | MHC class I |
| CD9 | p24, MRP-1 | 22-27 | pre-B, eosinophils, basophils, platelets, T$^{act}$ | cellular adhesion and migration | |
| CD10 | CALLA, NEP, gp100 | 100 | B precursors, T precursors, neutrophils | zinc-binding metalloproteinase, B cell development | |
| CD11a | LFA-1, integrin αL, ITGAL | 180 | lymphocytes, granulocytes, monocytes, macrophages | intercellular adhesion, T costimulation, heterodimer with CD18 | CD50, CD54, CD102 |
| CD11b | Mac-1, integrin αM, CR3, ITGAM | 170 | myeloid, NK, monocytes | adhesion, migration, heterodimer with CD18 | CD54, CD102, iC3b, fibrinogen, CD23 |
| CD11c | p150,95, CR4, integrin αX, ITGAX | 150 | DC, myeloid, NK, B subset, T subset | adhesion, migration, heterodimer with CD18 | CD54, iC3b, fibrinogen, CD23 |
| CD12 | | 90-120 | monocytes, granulocytes, platelets | | |
| CD13 | Aminopeptidase N, APN, gp150 | 150-170 | myeloid cells, AML | zinc-binding metalloproteinase | corona virus receptor |
| CD14 | LPS-R | 53-55 | monocytes, tissue macrophages | LPS sensor | LPS receptor |
| CD15 | Lewis-x, Lex, SSEA-1 | | granulocytes, neutrophils, eosinophils, monocytes | adhesion | |
| CD15s | Sialyl Lewis X | | neutrophils, eosinophils, monocytes, memory T, T$^{act}$, B, NK, HEV | adhesion | CD62L, CD62P |
| CD15u | Sulfated Lewis X | | myeloid subset | adhesion | |
| CD16a | FcγRIIIA | 50-65 | neutrophils, macrophages, NK, mast | component of low affinity Fc receptor, phagocytosis and ADCC | aggregated IgG |
| CD16b | FcγRIIIB | 48 | neutrophils | component of low affinity Fc receptor, phagocytosis and ADCC | IgG |
| CD17 | lactosylceramide, LacCer | 115-165 | neutrophils, monocytes, platelets, granulocytes, basophils, B subset | adhesion, phagocytosis | |
| CD18 | Integrin β2, ITGB2 | 95 | all leukocytes | heterodimer with CD11a, b and c, adhesion | CD50, CD54, CD102, iC3b, fibrinogen |
| CD19 | B4 | 95 | B, FDC | complex w/ CD21 and CD81, BCR co-receptor, B cell activation/ differentiation | |
| CD20 | B1, Bp35 | 33-37 | B, T subset | B cell activation | |
| CD21 | C3DR, CR2, EBV-R | 110, 145 | B, FDC, T subset | complex w/ CD19 and CD81, BCR co-receptor | C3d, CD23, EBV |
| CD22 | BL-CAM, Siglec-2 | 150 | B | adhesion, B-mono, B-T interactions | BPCNeuAc |
| CD23 | FcεRII | 45 | B, macrophages$^{act}$, eosinophils, FDC, platelets | signal transduction | IgE, CD21, CD11b, CD11c |
| CD24 | BA-1, HSA | 35-45 | B, granulocytes, T subset, epithelial | B cell differentiation marker | |
| CD25 | Tac, p55, IL-2Rα | 55 | T$^{act}$, B$^{act}$, Treg, lymphoid progenitors | forms high affinity IL-2 receptor with CD122 and CD132 | IL-2 |
| CD26 | DPP IV | 110 | mature thymocytes, T$^{act}$, B, macrophages, NK | dipeptidyl peptidase, T costimulation | FAP, HIV Tat, collagen |
| CD27 | T14, TNFRSF7, S152 | 50-55 | medullary thymocytes, T, B subset, NK subset, HSC | T costimulation | CD70 |
| CD28 | Tp44, T44 | 44 | most T, thymocytes, plasma | T costimulation | CD80, CD86 |
| CD29 | Integrin β1, platelet GPIIa, ITGB1 | 130 | All leukocytes, fibroblasts, endothial, epithelial | Associates with integrin α subunits (CD49a-f, C D51) | VCAM-1, MAdCAM-1, ECM proteins |
| CD30 | Ki-1, Ber-H2 | 105-120 | B$^{act}$, T and NK cells , Reed-Sternberg cells, anaplastic large cell lymphoma | lymphocyte proliferation, apoptosis | CD153 |
| CD31 | PECAM-1, endocam, GPIIa | 130-140 | leukocytes, platelets, endothelial | adhesion, signal transduction | CD31, CD38 |
| CD32 | FcγRII | 40 | monocytes, granulocytes, B, platelets, macrophages | low affinity Fc receptor, B cell activation | polymeric or aggregated IgG |
| CD33 | p67, Siglec-3, My9 | 67 | myeloid progenitors, monocytes, granulocytes, DC, macrophages | adhesion | |
| CD34 | My10, Mucosialin, gp105-120 | 105-120 | hematopoietic precursors, capillary endothelial, embryonic fibroblasts | stem cell marker, adhesion | CD62L |
| CD35 | CR1, C3b/C4bR, Immune adherence receptor | 250 | erythrocytes, B, monocytes, neutrophils, eosinophils, FDC, T subset | adhesion, phagocytosis | C3b, C4b |
| CD36 | GPIV, GPIIIb, OKM5 antigen, PASIV | 88 | platelets, monocytes, macrophages, endothelial | adhesion, phagocytosis | collagen (I, IV, V), thrombospondin, oxidized LDL |
| CD37 | gp52-40, Tspan-26 | 40-52 | B, B-CLL, HCL, B-NHL, Low on: T, granulocytes, monocytes, neutrophils, | signal transduction | |
| CD38 | T10, ADP-ribosyl cyclase | 45 | variable levels on majority of hematopoietic cells, high expression on plasma cells, B and T$^{act}$ | ecto-ADP-ribosyl cyclase, cell activation, signal transduction | CD31, hyaluronic acid |
| CD39 | ENTPD-1, gp80, EC3.6.1.5 | 78 | NK, macrophages, Langerhans cells, DC, B$^{act}$, Treg | B cell adhesion, ecto-apyrase | |
| CD40 | TNFRSF5, Bp50 | 48 | B, macrophages, FDC, endothelial, T subset | B differentiation/ costimulation, isotype-switching, rescues B cells from apoptosis | CD154 |
| CD41 | gpIIb, ITGA2B | 22, 125 | platelets, megakaryocytes | heterodimer with CD61, platelet activation and aggregation | vitronectin, fibrinogen, fibronectin, vWF, thrombospondin |
| CD42a | GPIX, GP9 | 22 | platelets, megakaryocytes | complex w/ CD42b, c and d, platelet adhesion/ activation | vWF and thrombin |
| CD42b | GPIba | 145 | platelets, megakaryocytes | complex w/ CD42a, c and d, platelet adhesion/ activation | vWF and thrombin |
| CD42c | GPIbb | 24 | platelets, megakaryocytes | complex w/ CD42a, b, d, platelet adhesion/ activation | vWF and thrombin |
| CD42d | GPV | 82 | platelets, megakaryocytes | complex w/ CD42a-c | vWF and thrombin |
| CD43 | Leukosialin, sialophorin, gpL115 | 115-135 | leukocytes, except resting B, platelets$^{low}$ | inhibits adhesion | CD54, hyaluronic acid |
| CD44 | H-CAM, Pgp-1, Hermes antigen, ECMRIII | 80-95 | leukocytes, endothelial, epithelial | adhesion, migration | hyaluronin, osteopontin, fibronectin |
| CD44std | H-CAM, Pgp-1, Hermes antigen, ECMRIII | 80-95 | leukocytes, endothelial, epithelial | adhesion, migration | hyaluronin, osteopontin, fibronectin |
| CD44var (v4) | CD44 variant 1-10 | | heterogeneous expression, constitutively on epithelial, monocytes, leukocytes$^{act}$ | adhesion, metastasis | hyaluronin |
| CD44var (v10) | CD44 variant 1-10 | | heterogeneous expression, constitutively on epithelial, monocytes, leukocytes$^{act}$ | adhesion, metastasis | hyaluronin |
| CD44var (v7-v8) | CD44 variant 1-10 | | heterogeneous expression, constitutively on epithelial, monocytes, leukocytes$^{act}$ | adhesion, metastasis | hyaluronin |
| CD44 (v6) | CD44 variant 1-10 | | heterogeneous expression, constitutively on epithelial, monocytes, leukocytes$^{act}$ | adhesion, metastasis | hyaluronin |
| CD44 (v3) | CD44 variant 1-10 | | heterogeneous expression, constitutively on epithelial, monocytes, leukocytes$^{act}$ | adhesion, metastasis | hyaluronin |
| CD44 (v6) | CD44 variant 1-10 | | heterogeneous expression, constitutively on epithelial, monocytes, leukocytes$^{act}$ | adhesion, metastasis | hyaluronin |
| CD44 (v5) | CD44 variant 1-10 | | heterogeneous expression, constitutively on epithelial, monocytes, leukocytes$^{act}$ | adhesion, metastasis | hyaluronin |
| CD44 (v7) | CD44 variant 1-10 | | heterogeneous expression, constitutively on epithelial, monocytes, leukocytes$^{act}$ | adhesion, metastasis | hyaluronin |
| CD45 | LCA, PTPRC, T200 | 180-240 | all leukocytes | tyrosine phosphatase, signaling | |
| CD45R | B220 | 220 | B, T$^{act}$ | | |
| CD45RA | | 205-220 | B, naïve T, monocytes | exon A isoforms of CD45 | |
| CD45RB | | 190-220 | B, T subset, monocytes, macrophages, granulocytes | exon B isoforms of CD45 | |
| CD45RC | | 190-220 | B, T subset, NK | exon C isoforms of CD45 | |
| CD45R0 | | 180 | T$^{act}$, memory T, B subset, monocytes, macrophages, granulocytes | isoform of CD45 lacking A, B, C exons | CD22 |
| CD46 | MCP | 56-76 | nucleated cells | membrane cofactor protein | C3b, C4b, measles virus receptor |
| CD47 | IAP, neurophilin | 45-60 | hematopoietic cells, epithelial, endothelial, fibroblasts | leukocyte adhesion, migration, activation | thrombospondin |
| CD47R | MEM-133 | 120 | new designation for CDw149, similar distribution as CD47 but dimmer | | |
| CD48 | Blast-1, Hulym3 | 45 | all leukocytes | cell adhesion | CD2 (low affinity), CD244 |
| CD49a | VLA-1, Integrin α1, ITGA1 | 210 | T$^{act}$, monocytes | adhesion, signal transduction, heterodimer with CD29 | collagen, laminin 1 |
| CD49b | VLA-2, Integrin α2, ITGA2 | 165 | B, monocytes, platelets, T$^{act}$, megakaryocytes | adhesion, signal transduction, heterodimer with CD29 | collagen, laminin |
| CD49c | VLA-3, Integrin α3, ITGA3 | 125 | B and T$^{low}$, most adherent cell lines | adhesion, signal transduction, heterodimer with CD29 | collagen, laminin, fibronectin |
| CD49d | VLA-4, Integrin α4, ITGA4 | 150 | T, B, NK, thymocytes, monocytes, eosinophils, mast, DC | adhesion, signal transduction, heterodimer with CD29 or ITGB7 (integrin β7) | CD106, fibronectin, MAdCAM-1 |
| CD49e | VLA-5, Integrin α5, ITGA5 | 25, 135 | thymocytes, T, monocytes, platelets, and B$^{act}$ | adhesion, signal transduction, heterodimer with CD29 | fibronectin |
| CD49f | VLA-6, Integrin α6, ITGA6 | 125 | memory T, thymocytes, monocytes, platelets, megakaryocytes, epithelial | adhesion, signal transduction, heterodimer with CD29 or CD104 | laminin, merosin |
| CD50 | ICAM-3 | 110-120 | hematopoietic, endothelial, epidermal Langerhans | adhesion, costimulation | CD11a/CD18, integrin αd/CD18, CD209 |
| CD51 | Vitronectin receptor, ITGAV | 24, 125 | platelets$^{low}$, endothelial, osteoblasts, melanomas | adhesion, signal transduction, heterodimer with CD29, CD61, ITGB5, ITGB6, or ITGB8 | vitronectin, vWF, fibrinogen, thrombospondin |
| CD52 | CAMPATH-1, HES | 21-28 | thymocytes, lymphocytes, monocytes, macrophages | unknown | |
| CD53 | MCR, Tspan-25 | 35-42 | leukocytes, DC, osteoblasts, osteoclasts | signal transduction | |
| CD54 | ICAM-1 | 90-110 | endothelial, monocytes, lymphocytes$^{act}$ | adhesion, signal transduction | CD11a/CD18, CD11b/CD18, rhinovirus |
| CD55 | DAF | 60-70 | hematopoietic, endothelial, soluble in plasma | complement regulation | C3b, C4b, CD97, echovirus, coxsackie B |
| CD56 | NCAM, Leu-19, NKH1 | 175-220 | NK, T subset, neurons, some large granular lymphocyte leukemias, myeloid leukemias | adhesion | chondroitin sulphate proteoglycans |
| CD57 | HNK-1, Leu-7 | 110 | NK subset, T subset, neural tissue | adhesion | CD62L, CD62P |
| CD58 | LFA-3 | 55-70 | all nucleated cells | adhesion | CD2 |
| CD59 | Protectin, MIRL, MACIF, P-18 | 19 | all nucleated cells | regulates complement-mediated cell lysis | C8, C9 |
| CD60a | GD3 | 90-120 | T subset, platelets, thymic epithelium, astrocytes | costimulation | |
| CD60b | 9-O-acetyl GD3 | | T subset, B$^{act}$ | | |
| CD60c | 7-O-acetyl GD3 | | T subset | | |
| CD61 | GPIIIa, Integrin β3 | 105 | platelets, megakaryocytes, macrophages, endothelial | adhesion, signal transduction, heterodimer with CD41 or CD51 | vitronectin, vWF, fibrinogen and fibronectin |
| CD62E | E-selectin, ELAM-1 | 97, 107-115 | activated endothelium | adhesion, cell rolling, metastasis | binds CD15s, CD162 |
| CD62L | L-selectin, LECAM-1, Leu-8, LAM-1 | 74, 95 | B, naïve T, memory T, monocytes, granulocytes, NK, thymocytes | adhesion, leukocyte homing and rolling | CD15s,CD34, CD57, CD162, GlyCAM-1, MAdCAM-1 |
| CD62P | P-selectin, PADGEM | 140 | platelets$^{act}$, endothelial, megakaryocytes | adhesion, leukocyte rolling, platelet-neutrophil and platelet-mono interactions | CD15s, CD162 |
| CD63 | LIMP, LAMP-3, ME491 | 53 | platelets$^{act}$, monocytes, macrophages, endothelial | lysosomal membrane protein, expressed on cell surface after activation | |
| CD64 | FcγRI, FcRI | 72 | monocytes, macrophages, DC | phagocytosis and ADCC | monomeric and aggregated IgG |
| CD65 | VIM2 | | granulocytes, monocyte subset, myeloid leukemias | | |
| CD65s | VIM2 | | granulocytes, monocytes, myeloid leukemias | phagocytosis | |
| CD66a | BGP-1, NCA-160, CEACAM1 | 160-180 | granulocytes, epithelial | cell adhesion | CD62E, CD66a, CD66c, CD66e |
| CD66b | CD67, CGM6, NCA-95, CEACAM8 | 95-100 | granulocytes | cell adhesion | CD66c |
| CD66c | NCA, NCA-50/90, CEACAM6 | 90 | granulocytes, epithelial | cell adhesion | CD62E, CD66a, CD66b, CD66c, CD66e |
| CD66d | CGM1, CEACAM3 | 35 | granulocytes | putative role in cell adhesion and signaling | |
| CD66e | CEA, CEACAM5 | 180-200 | epithelial | cell adhesion | CD66a, CD66c, CD66e |
| CD66f | PSG1, Sp-1 | 54-72 | placental syncytiotrophoblasts, fetal liver | immune regulation, protects fetus from maternal immune system | |
| CD68 | Macrosialin, gp110 | 110 | monocytes, macrophages, neutrophils, basophils, mast, DC, myeloid progenitors, liver, B subset | scavenger receptor | oxidized LDL |
| CD69 | AIM, MLR3, VEA | 28, 32 | T$^{act}$, B, NK and granulocytes, thymocytes, platelets, Langerhans | signal transduction | |
| CD70 | Ki-24, CD27L | 50, 70, 90, 160 | B$^{act}$ and T$^{act}$, NK | T and B cell costimulation | CD27 |
| CD71 | T9, TFRC | 95 | proliferating cells, reticulocytes, erythroid precursors | iron uptake | transferrin receptor |
| CD72 | Ly-32.2, Ly-19.2 | 42 | B, FDC, macrophages | B proliferation | CD5, CD100 |
| CD73 | NT5E | 69 | B subset, T subset, FDC, epithelial, endothelial | ecto-5'-nucleotidase, nucleoside uptake, T costimulation, lymph adhesion | |
| CD74 | Ii, invariant chain | 33, 35, 41, 43 | B, macrophages, monocytes, Langerhans, DC, T$^{act}$ | MHC class II traffic and function, maturation of follicular B cells | |
| CD75 | lactosamines | 67, 85 | B subset, epithelial | lactosamines | |
| CD75s | sialylated lactosamines | | B subset, T subset | a-2,6-sialylated lactosamines (previously CDw75 and CDw76) | |
| CD77 | Gb3, Pk blood groupBLA, CTH | 1 | germinal center B, Burkitt's lymphomas$^{high}$, follicular lymphomas$^{low}$ | apoptosis | Shiga toxin, verotoxin 1 |
| CD79a | Iga, MB1 | 33, 45 | B | component of BCR, BCR surface expression and signal transduction | |
| CD79b | Igb, B29 | 37 | B | component of BCR, BCR surface expression and signal transduction | |
| CD80 | B7, B7-1, BB1 | 60 | B$^{act}$ and T$^{act}$, macrophages, DC | T costimulation | CD28, CD152 |
| CD81 | TAPA-1 | 26 | B, T, NK, thymocytes, DC, endothelial, fibroblast, neuroblastomas, melanomas | complex w/ CD19, CD21 and CD225, signaling, T costimulation | |
| CD82 | R2, 4F9, C33, IA4 | 50-53 | leukocytes, fibroblast, epithelial, endothelial | signal transduction, associates with MHC-I, MHC-II, CD37, CD52, CD81 and β1 integrins | |
| CD83 | HB15 | 43 | mature DC, Langerhans, B$^{act}$ and T$^{act}$ | dendritic cell marker | |
| CD84 | GR6, SLAMF5 | 73 | thymocytes, monocytes, platelets$^{low}$, B, T subset, tissue macrophages | putative role in adhesion, costimulation | |
| CD85a | LIR-3, ILT5, HL-9, LILRB3 | 110 | monocytes, macrophages, DC, granulocytes, T subset | suppression of NK cell-mediated cytotoxicity | |
| CD85b | ILT8, LILRA6 | | NK, T subset, monocytes, macrophages, DC, B | activation of NK-mediated cytotoxicity, associates with FcRγ | |
| CD85c | LIR8, LILRB5 | | NK, T subset, monocytes, macrophages, DC, B | activation of NK-mediated cytotoxicity, associates with FcRγ | |
| CD85d | LIR2, ILT4, MIR10, LILRB2 | 110 | NK, monocytes, macrophages | suppression of NK cell-mediated cytotoxicity, associates with HLA -G, -B, -G1 | |
| Cd85e | ILT6, LIR4, LILRA3 | | B, NK | activation of NK-mediated cytotoxicity, associates with FcRγ | |
| CD85f | ILT11, LIR9, LILRA5 | | monocytes, neutrophils, macrophages, DC | activation of NK-mediated cytotoxicity, associates with FcRγ | |
| CD85g | LIR4, ILT7 | 55 | pDC | signaling for cytokine production | |
| CD85h | LIR7, ILT1, LILRA2 | 53 | monocytes | activation of NK-mediated cytotoxicity, associates with FcRγ | |
| CD85i | ILR6, LILRA1 | | T subset, monocytes, macrophages, DC, B | activation of NK-mediated cytotoxicity, associates with FcRγ | |
| CD85j | LIR1, ILT2, MIR-7, LILRB1 | 110 | DC, monocytes., T, mature B | suppression of NK cell-mediated cytotoxicity, associates with HLA -A, -B, -C | |

| Antigen Name | Alternate Names | MW (kD) | Distribution | Function | Ligand/Receptor |
|---|---|---|---|---|---|
| CD85k | LIR5, ILT3, HM18, LILRB4 | 60 | DC, macrophages, monocytes, pDC, endothelial | thought to be an inhibitory receptor | |
| CD85l | ILT9, LILRP1 | | NK, T subset, monocytes, macrophages, DC, B | associates with FcRγ | |
| CD85m | ILT10 | | NK, T subset, monocytes, macrophages, DC, B | associates with FcRγ | |
| CD86 | B70, B7-2 | 80 | monocytes, DC, B$^{act}$ and T$^{act}$ | T costimulation | CD28, CD152 |
| CD87 | UPA-R, PLAUR | 39-66 | monocytes, NK, T$^{act}$, endothelial, fibroblasts | inflammatory cell invasion, metastasis, extracellular matrix degradation | uPA, vitronectin |
| CD88 | C5aR C5R1 | 43 | granulocytes, monocytes, macrophages, DC | granulocyte activation | C5a receptor |
| CD89 | FcaR, IgA-R | 55-75 | monocytes, macrophages, granulocytes, neutrophils, B subset, T subset | phagocytosis, degranulation, respiratory burst | IgA1, IgA2 |
| CD90 | Thy-1 | 25-35 | HSC, neurons | hematopoietic stem cell and neuron differentiation, adhesion, signal transduction | CD11b/CD18 |
| CD91 | α2MR, LRP1 | 600 | monocytes, macrophages, neurons, fibroblasts | lipid homeostasis, signal transduction | α2-macroglobulin, LDLs, HSP96 |
| CD92 | p70, CHTL1. CDw92, SLC44A1 | 70 | neutrophils, monocytes, granulocytes | putative ligand transporter | choline |
| CD93 | C1qRp | 120 | neutrophils, monocytes, endothelial, granulocytes, NK, platelets | clearance of apoptotic cells, adhesion | C1q, MBL2, SPA |
| CD94 | Kp43, KLRD1 | 43 | NK, T subset | complex w/ NKG2, inhibits NK function | |
| CD95 | Apo-1, Fas, TNFRSF6 | 45 | lymphocytes$^{act}$, monocytes, neutrophils | apoptosis | CD178 (FasL) |
| CD96 | TACTILE | 160 | T$^{act}$, NK | adhesion of activated T and NK | CD155 |
| CD97 | BL-KDD/F12 | 74, 80, 90 | T$^{act}$, B, monocytes. macrophages, granulocytes, DC | adhesion, signaling | CD55 |
| CD98 | 4F2, FRP-1, SLC3A2 | 40, 80 | monocytes, T$^{act}$, B, and NK | cellular activation, adhesion | |
| CD99 | MIC2, E2 | 32 | leukocytes | T cell activation, adhesion | |
| CD99R | E2 | 32 | T, NK, myeloid cells, thymocytes | isoform of CD99 | |
| CD100 | Sema4D | 150 | hematopoietic cells except immature BM cells, RBC and platelets | cell adhesion, cellular activation | CD72, plexin B1 |
| CD101 | V7, P126, IGSF2 | 120 | monocytes, granulocytes, DC, T$^{act}$ | T cell activation | |
| CD102 | ICAM-2 | 55-65 | monocytes, platelets, endothelial | costimulation, adhesion, lymphocyte recirculation | CD11a/CD18 |
| CD103 | ITGAE, HML-1, integrin αE | 25, 150 | intraepithelial lymph, lymph subset, activated lymph | heterodimer with β7, lymph homing/retention | E-Cadherin |
| CD104 | β4 integrin | 220 | epithelium, Schwann cells, keratinocytes, some tumor cells | heterodimer with CD49f, cell adhesion, differentiation, metastasis | laminin |
| CD105 | Endoglin, ENG | 95 | endothelial, BM stroma, activated monocytes | cellular response to TGFβ1, adhesion, embryonic angiogenesis | TGFβ1, TGFβ3 |
| CD106 | VCAM-1, INCAM-110 | 110 | endothelial$^{act}$, FDC | leukocyte adhesion, migration, costimulation | CD49d/CD29, CD49d/β7 |
| CD107a | LAMP-1 | 110 | platelets$^{act}$, T, endothelial, granulocytes, macrophages, DC, metastatic tumors | lysosomal membrane protein | galectin-3, CD62L, C62E, CD62P |
| CD107b | LAMP-2 | 120 | platelets$^{act}$, T, endothelial, granulocytes, metastatic tumors | lysosomal membrane protein | galectin-3, CD62L, C62E, CD62P |
| CD108 | SEMA7A, JMH | 80 | erythrocytes, lymphoblasts | putative role in inflammation | CD232 |
| CD109 | Platelet activation factor, 8As, E123 | 170 | T$^{act}$ and platelets, CD34+ subset, endothelial, HUVEC | negative regulator of TGFβ in keratinocytes | |
| CD110 | TPO-R, C-MPL, | 82-84 | megakaryocytes, platelets, some CD34+ stem cells$^{low}$ | regulates megakaryocyte and platelet formation | thrombopoietin |
| CD111 | PRR1, Nectin-1, PVRL1, Hve C1 | 64-72 | stem cell subset, macrophages, neutrophils | intercellular adhesion | CD112, CD113, CD155, nectin-4 |
| CD112 | PRR2, Nectin-2, HVEB | 64-72 | CD34+ subset, megakaryocytes, endothelial, epithelial | intercellular adhesion | CD111, CD113, CD155 |
| CD113 | PVRL3, Nectin3 | 83 | testis, placenta, epithelial | adhesion molecule that interacts with afadin | CD111, CD112, CD155 |
| CD114 | G-CSFR, CFS3R | 95, 139 | granulocytes, monocytes, platelets, endothelial | myeloid differentiation/proliferation | G-CSF |
| CD115 | M-CSFR, c-fms, CSF-1R | 150 | monocytes, macrophages, osteoclasts, DC, monocytic progenitors | monocytic differentiation/ proliferation | M-CSF |
| CD116 | GM-CSFRa | 70-85 | monocytes, granulocytes, DC, endothelial, neutrophils, fibroblasts | associates with CD131, myeloid differentiation/ proliferation | GM-CSF |
| CD117 | c-kit, SCFR | 145 | hematopoietic stem cells and progenitors, fibroblasts, mast | hematopoietic progenitor development/ differentiation | SCF |
| CD118 | LIFR, gp190 | 190 | epithelial cells in adult and embryo | associates with CD130, signal transduction, soluble form inhibits activity of LIF | LIF |
| CD119 | IFNGR1, IFN-γRα | 90-100 | macrophages, monocytes, B, T, NK, neutrophils, endothelial, epithelial, fibroblasts | associates with IFN-γ AF-1, host defense | Ifnγ |
| CD120a | TNFR-I, TNFRSF1A | 50-60 | nucleated cells | mediates pro-inflammatory cellular responses, programmed cell death and anti-viral activity | TNFα, TNFβ |
| CD120b | TNFR-II, TNFRSF1B | 75-85 | nucleated cells | mediates pro-inflammatory cellular responses, programmed cell death and anti-viral activity | TNFα, TNFβ |
| CD121a | IL-1R type I, IL1R | 80 | T cells, thymocytes, chondrocytes, synovial cells, hepatocytes, endothelial, keratinocytes | IL-1 signaling | IL-1α, IL-1β, IL1ra |
| CD121b | IL-1R, type II | 60-70 | B cells, monocytes, macrophages, neutrophils | IL-1 signaling, decoy receptor for IL-1b | IL-1α, IL-1β, IL1ra |
| CD122 | IL2RB | 75 | NK, T, B, monocytes, macrophages | associates with CD25, CD132 and CD215, signal transduction | IL-2, IL-15 |
| CD123 | IL3RA | 70 | lymphocyte subset, basophils, hematopoietic progenitors, macrophages, DC, megakaryocytes | associates with CD131 | IL-3 |
| CD124 | IL4R | 140 | mature T and B, hematopoietic precursors, fibroblast, epithelial, endothelial | associates with CD132 and IL-13Rα, T cell growth/ differentiation | IL-4, IL-13 |
| CD125 | IL5RA | 60 | eosinophils, basophils, B, mast | associates with CD131 | IL-5 |
| CD126 | IL6R | 80 | B$^{act}$, T, monocytes, fibroblasts | associates with CD130 | IL-6 |
| CD127 | IL7R | 65-75 | T, B cell precursors, thymocytes | associates with CD132, B and T cell development | IL-7 |
| CD129 | IL9R | 64 | T, B, erythroid and myeloid precursors, mast, macrophages, epithelial | associates with CD132, B and T cell development | IL-9 |
| CD130 | IL-6Rβ, gp130, IL6ST | 130 | B$^{act}$, plasma cells, T, monocytes, endothelial | associates with CD126, LIF-R, OSMRb, signal transduction | oncostatin M, IL-6, LIF |
| CD131 | CFS2RB, IL-3R common β | 95-120 | monocytes, granulocytes, early B | associates with CD123, CD125, CD116, signal transduction | |
| CD132 | Common γ, IL2RG | 64 | T, B, NK, monocytes, macrophages, granulocytes | associates with CD25, CD122, CD124, CD127, CD129, and CD215, signal transduction | |
| CD133 | AC133, prominin-like 1, PROM1 | 120 | HSC and progenitors, epithelial and endothelial precursors | | |
| CD134 | OX-40, TNFRSF4 | 48-50 | T$^{act}$, Treg | T cell activation, differentiation, apoptosis | CD252 |
| CD135 | Flt3/Flk-2 | 130-150 | myelomonocytic, primitive B progenitors | receptor tyrosine kinase, early lymph development | FLT3 ligand |
| CD136 | MSP-R, RON, MST1R | 180 | epithelial , CNS, PNS, hematopoietic subset | migration, morphological change and proliferation of different target cells | MSP, HGF1 |
| CD137 | 4-1BB, TNFRSF9 | 30 | T$^{act}$, B$^{act}$ | T costimulation | 4-1BB ligand |
| CD138 | Syndecan-1 | 80-150 | plasma cells, pre-B, basolateral surface of epithium, neurons | cell morphology, adhesion and migration | ECM |
| CD139 | | 228 | B, monocytes, granulocytes, erythrocytes$^{low}$, FDC | | |
| CD140a | PDGFRA, PDGFRα | 180 | mesenchymal, fibroblasts, glial cells, monocytes, endothelial | tyrosine kinase receptor | PDGF-A, PDGF-B, PDGF-C |
| CD140b | PDGFRB, PDGFRβ | 180 | mesenchymal, endothelial, stromal cells | tyrosine kinase receptor | PDGF-B |
| CD141 | Thrombomodulin, THBD | 100 | monocytes, neutrophils, endothelial, smooth muscle cells | initiation of protein C anticoagulant signal | thrombin |
| CD142 | Tissue Factor, TF, F3 | 45 | monocytes, endothelial, keratinocytes, epithelial | initiator of clotting | factor VIIa |
| CD143 | ACE | 170 | endothelial, epithelial, neurons, fibroblasts, macrophages$^{act}$ | angiotensin converting enzyme | angiotensin I, bradykinin |
| CD144 | VE-Cadherin, Cadherin-5 | 130 | endothelial, stem cells | adhesion, endothelium biology | CD144, β-catenin |
| CDw145 | | 90, 110 | endothelial | | |
| CD146 | MUC18, S-endo, MCAM, Mel-CAM | 113-118 | endothelial, melanoma, FDC, T$^{act}$ | adhesion | |
| CD147 | Neurothelin, basoglin, EMMPRIN, BSG | 28 | leukocytes, erythrocytes, platelets, endothelial | adhesion | CD62E |
| CD148 | HPTP-eta, PTPRJ, DEP-1 | 240-260 | granulocytes, monocytes, DC, T$^{act}$ | tyrosine phosphatase R Type III, signaling | |
| CD150 | SLAM, IPO-3 | 75-95 | T subset (high upon activation), B, DC, endothelial | costimulation, proliferation, Ig production, measles virus receptor, T and B cell activation | CD150 |
| CD151 | PETA-3, Tspan-24, RAPH | 32 | endothelial, megakaryocytes, platelets, epithelial | cell adhesion, associates with integrins | |
| CD152 | CTLA-4 | 33 | T$^{act}$ and B | negative regulation of T cell activation | CD80, CD86 |
| CD153 | CD30L, TNFSF8 | 40 | T$^{act}$, macrophages, netrophils, B | T costimulation | CD30 |
| CD154 | CD40L, gp39, TRAP, TNFSF5 | 32-39 | T$^{act}$, B, macrophages, DC | B and DC costimulation | CD40 |
| CD155 | PVR, NECL5 | 80-90 | monocytes, macrophages | cell migration and adhesion, associates with CD113 | polio virus, CD96 |
| CD156a | ADAM8, MS2 | 69 | neutrophils, monocytes, granulocytes | leukocyte extravasation, adhesion | |
| CD156b | TACE/ADAM 17 | 100 | T, neutrophils, monocytes, macrophages, DC, enothelial | cleaves membrane proteins (TNF, TGFα) to generate soluble forms | |
| CD156c | ADAM10 | 98 | neural precursors, fibroblasts, leukocytes | proteolytic cleavage of cell-surface molecules including Notch, TNF-α, APP and ephrin-A2 | |
| CD157 | BST-1 | 42-45 | granulocytes, monocytes, B progenitors, endothelial | ADP-ribosyl-cyclic ADP-ribose hydrolase activities, pre-B cell growth | |
| CD158a | KIR2DL1, p58.1 | 50-58 | NK subset, T subset | inhibition of NK cell cytolytic activity, MHC class-I specific NK receptor | HLA-C |
| CD158b1 | KIR2DL2, p58.2 | 50-58 | NK subset, T subset | inhibition of NK cell cytolytic activity, MHC class-I specific NK receptor | HLA-C |
| CD158b2 | KIR2DL3, p58.2 | 50-58 | NK subset, T subset | inhibition of NK cell cytolytic activity, MHC class-I specific NK receptor | HLA-C |
| CD158d | KIR2DL4 | 41 | NK subset, T subset | inhibition of NK cell cytolytic activity, MHC class-I specific NK receptor | HLA-G |
| CD158e | KIR3DL1 | 70 | NK subset, T subset | inhibition of NK cell cytolytic activity, MHC class-I specific NK receptor | HLA-B |
| CD158f | KIR2DL5A | 50-58 | NK subset, T subset | inhibition of NK cell cytolytic activity, MHC class-I specific NK receptor | HLA-B |
| CD158g | KIR2DS5 | | NK subset, T subset | activation of NK cell cytolytic activity, MHC class-I specific NK receptor | |
| CD158h | KIR2DS1 | 50 | NK subset, T subset | activation of NK cell cytolytic activity, MHC class-I specific NK receptor | HLA-C |
| CD158i | KIR2DS4 | 35, 58 | NK subset, T subset | activation of NK cell cytolytic activity, MHC class-I specific NK receptor | HLA-C |
| CD158j | KIR2DS2 | 50 | NK subset, T subset | activation of NK cell cytolytic activity, MHC class-I specific NK receptor | HLA-C |
| CD158k | KIR3DL2 | 70 | NK subset, T subset | inhibition of NK cell cytolytic activity, MHC class-I specific NK receptor | |
| CD158z | KIR3DL3 | | NK subset, T subset | inhibition of NK cell cytolytic activity, MHC class-I specific NK receptor | |
| CD159a | NKG2A, KLRC1 | 43 | T subset, NK | associates with CD94, inhibition of NK cell cytolytic activity | HLA-E |
| CD159c | NKG2C, KLRC2 | 40 | T subset, NK | associates with CD94, inhibition of NK cell cytolytic activity | HLA-E |
| CD160 | BY55,NK1, NK28 | 27 | NK subset, T subset | costimulation of CD8 T | HLA-C |
| CD161 | NKR-P1A, KLRB1 | 40 | T subset, NK | NK cell-mediated cytotoxicity | |
| CD162 | PSGL-1 | 120 | monocytes, granulocytes, most lymphocytes, HSC | leukocyte adhesion, rolling | CD62P, CD62E, CD62L |
| CD162R | PEN-5 | 110-140 | NK subset | homing receptor for NK cells | CD62L |
| CD163 | M130, GHI/61, D11, RM3/1 | 130 | monocytes, macrophages | hemoglobin/haptoglobin scavenger receptor | |
| CD164 | MGC-24, MUC-24 | 80 | HSC, embryonal tissue, monocytes, stromal cells | putative role in intracellular adhesion, hematopoietic progenitor cell-stromal cell interaction | |
| CD165 | AD2, gp37 | 42 | lymphocytes, thymocytes, platelets, epithelial | adhesion, thymocyte-thymic epithelium interaction | |
| CD166 | ALCAM | 105 | neurons, monocytes, epithelial, fibroblasts, T$^{act}$ | migration, adhesion | CD6 |
| CD167a | DDR1 | 120 | epithelial, DC | tyrosine kinase, adhesion | collagen |
| CD168 | RHAMM | 84-88 | myelomonocytic lineage and DC | associates with CD44, adhesion, tumor migration, metastasis | |
| CD169 | sialoadhesin, Siglec-1 | 185 | tissue macrophage subset | adhesion, cell-cell and cell-matrix interactions | CD43, CD206, CD227 |
| CD170 | Siglec-5, CD33-like2 | 140 | macrophage subset, neutrophils, DC, monocytes | adhesion | α2,3- and α2,6-linked sialic acid |
| CD171 | L1 | 200-210 | glial cells, monocytes, T subset, B, DC, neurons | adhesion and migration | CD9, CD24, CD56, CD142, CD166, CD171, neurocan, phosphocan, laminin |
| CD172a | SIRPa, SHPS-1 | 110 | monocytes, macrophages, granulocytes T subset, stem | adhesion, signaling | CD47 |
| CD172b | SIRPβ1 | 50 | monocytes, granulocytes, DC | negative regulation of RTK-coupled signaling, associates with DAP12 | |
| CD172g | SIRPγ, SIRPβ2 | 45-50 | T, NK, B | negative regulation of RTK-coupled signaling | CD47 |
| CD173 | Blood group H type 2, blood group type O | | erythrocytes, stem cell subset | biosynthetic precursor of the A and B antigens | |
| CD174 | Lewis Y, FUT3, LeY | | stem cell subset, epithelial | putative role as co-factor to pro-coagulant y | |
| CD175 | TN antigen | | stem cell subset | precursor for ABO antigens | |
| CD175s | Sialyl-Tn | | erythroblasts, epithelial, endothelial | putative role in tumor metastasis | |
| CD176 | TF, Thomson Friedenreich Ag | | stem cell subset,erythrocytes, endothelial | putative role in tumor metastasis | |
| CD177 | NB1, HNA-2A | 56-62 | neutrophil subset | | |
| CD178 | FasL, CD95L | 38-42 | T$^{act}$, testis, neutrophil, monocytes, NK | induces apoptosis | CD95 |
| CD179a | VPREB1, IGVPB | 16-18 | pro- and pre-B | B cell differentiation/signaling, associates with CD179b and IgM | |
| CD179b | IGLL1, IGO | 22 | pro- and pre-B | B cell differentiation/signaling, associates with CD179a and IgM | |
| CD180 | RP-105, LY64 | 95-105 | B subset, monocytes, DC | B cell activation, LPS signaling, associates with MD-1 | |
| CD181 | CXCR1, IL-8RA | 39 | neutrophils, basophils, NK, T subset, monocytes | neutrophil chemotaxis, phospholipase D activation, repiratory burst | IL-8 |
| CD182 | CXCR2, IL-8RB | 40 | neutrophils, basophils, NK, T subset, monocytes | chemotaxis of neutrophils | IL-8, GRO-α, β, γ and NAP-2 |
| CD183 | CXCR3 | 40 | eosinophils, T$^{act}$, NK, GM-CSF activated CD34+ progenitors | associates with CXCL-10 (IP10), CXCL9 (Mig) and CXCL11 (I-TAC), chemotaxis of T cells | |
| CD184 | CXCR4, fusin | 45 | B, DC, T subset, monocytes, endothelial, epithelial, granulocytes | cell migration and HIV entry | CXCL12, HIV-1 |
| CD185 | CXCR5, BLR1 | 45 | mature B, T subset, monocytes and Burkitt Lymphoma cells | cell migration | CXCL13 |
| CD186 | CXCR6, BONZO | 40 | T$^{act}$, B subset, NK subset | coreceptor for SIV, strains of HIV-2 and m-tropic HIV-1 | CXCL16 |
| CD191 | CCR1, MIP-1αR, RANTES-R | 39 | T, monocytes, macrophages, NK, DC, stem cell subset | binds C-C type chemokines | CCL4, CCL5, CCL6, CCL14, CCL15, CCL16, CCL23 |
| CD192 | CCR2, MCP-1-R | 40 | NK$^{act}$, monocytes$^{act}$, basophils, macrophages, T subset, B, endothelial | alternative coreceptor for HIV-1 | CCL2, CCL8, CCL16 |
| CD193 | CCR3, CKR3 | 45 | eosinophils, basophils, T subset | alternative coreceptor for HIV-1 | CCL11, CCL26, CCL7, CCL13, CCL15, CCL24, CCL5, CCL28 |
| CD195 | CCR5 | 45 | lymphocytes, monocytes, macrophages and immature DC | coreceptor for HIV-1 | CCL2, CCL3, CCL4, CCL5, CCL11, CCL13, CCL14, CCL16 |
| CD196 | CCR6, LARC receptor, DRY6 | 45 | T subset, B, DC subset, Langerhans | binds β-defensins | CCL20 |
| CD197 | CCR7, EBI-1 | 45 | T subset, DC subset, B | cell migration to secondary lymphoid tissue | CCL19, CCL21 |
| CDw198 | CCR8, GPRCY6, TER1 | 50 | T, high in Th2, NK, monocytes | allergic inflammation, alternative coreceptor for HIV-1 | CCL1 |
| CDw199 | CCR9, GPR-9-6 | 43 | subset of memory T, lamina propria mononuclear cells | cell migration, alternative coreceptor for HIV-1 | CCL25 |
| CD200 | OX-2 | 45-50 | thymocytes, endothelial, B$^{act}$, T$^{act}$ | inhibition of immune response | OX-2R |
| CD200R | OX-2R | 48 | myeloid lineage | inhibitory receptor, inhibits TNFα secretion | CD200 |
| CD201 | EPC-R, PROCR | 50 | endothelial subset | involved in blood coagulation | protein C |
| CD202b | Tie2, Tek | 150 | stem cells, endothelial | receptor tyrosine kinase involved in angiogenesis | angiopoietin-1 |
| CD203c | ENPP3, PDNP3, PD-1b | 130-150 | basophils, mast, glioma cells, HSC | ectoenzyme, binding to and clearance of extracellular nucleotides | nucleotides |
| CD204 | MSR-1, SRA | 220 | macrophages, DC | endocytosis of macromolecules | LDL |
| CD205 | DEC-205 | 205 | DC, thymic epithelial | endocytic receptor for antigen up-take/processing | |
| CD206 | MRC1 | 180 | DC subset, macrophages | phagocytosis and pinocytosis of mannose containing molecules | oligomannose-containing carbohydrates |
| CD207 | Langerin | 40 | Langerhans, DC | endocytic receptor | mannose-bearing glycoproteins and glycolipids |

| Antigen Name | Alternate Names | MW (kD) | Distribution | Function | Ligand/Receptor |
|---|---|---|---|---|---|
| CD208 | LAMP3, DC-LAMP | 70-90 | DC$^{act}$, interdigitating DC | putative role in sorting MHC Class II | |
| CD209 | DC-SIGN | 44 | DC subset, macrophages | involved in innate immunity, HIV-1 binding protein | CD50, CD102 |
| CDw210a | IL10RA, IL-10Rα | | T, B, NK, monocytes, macrophages | signaling | IL-10 |
| CDw210b | IL10RB, IL-10Rβ | | T, B, NK, monocytes, macrophages | | IL-10, IL-22 |
| CD212 | IL-12Rβ1, IL12RB1 | 100 | T$^{act}$, NK$^{act}$ | associates with IL-12 receptor β2 | IL-12 |
| CD213a1 | IL-13Rα1, IL13RA1 | 65 | B, monocytes, fibroblasts, endothelial | associates with CD124 | IL-13 |
| CD213a2 | IL-13Rα2, IL13RA2 | 65 | B, monocytes, fibroblasts, endothelial | signaling | IL-13 |
| CD215 | IL-15Rα | | T, B | associates with CD132 and CD122 | IL-15 |
| CD217 | IL-17R | 120 | B, T, NK, granulocytes, monocytes, macrophages | involved in inflammation | IL-17 |
| CD218a | IL18R1, IL-18Rα, IL-1Rrp | 70 | lymphocytes, neutrophils, monocytes, granulocytes, endothelial, NK, DC | associates with CD218b | IL-18 |
| CD218b | IL-18Rβ, IL18RAP | 70 | T, NK and DC | associates with CD281a to enhance IL-18 binding | IL-18 |
| CD220 | INSR, Insulin-R | 140, 70 | leukocytes, fibroblasts, endothelial, epithelial | signaling | insulin |
| CD221 | IGF-1R, IGFR | 70, 140 | broad expression | signaling, cell proliferation, differentiation | IGF-I, IGF-II, insulin |
| CD222 | IGF2R, M6P-R | 250 | fibroblasts, granulocytes, lymphocytes and myocytes, 90-95% intracellular | adhesion, tumor growth | TGFβ-LAP, plasminogen, proliferin, LIF, IGFII, HSV |
| CD223 | LAG-3 | 70 | T$^{act}$ and NK | lymphocyte activation | MHC class II |
| CD224 | GGT1 | 27, 68 | lymphocytes, monocytes, granulocytes, endothelial, stem | maintains cellular redox, maintains intracellular glutathione (GSH) concentrations | |
| CD225 | Leu-13 | 17 | leukocytes, endothelial | associates with complexes of CD81, CD19 and CD21 | |
| CD226 | DNAM-1, PTA-1, TLiSA1 | 65 | T, NK, monocytes, platelets, HUVEC$^{act}$ | intercellular adhesion, lymphocyte signaling, cytotoxicity, associates with CD11a/CD18 | CD112, CD155 |
| CD227 | MUC1, EMA | 300 | epithelial, stem cell subset, FDC, monocytes, B subset, some myelomas | adhesion, signaling | CD54, CD169, selectins |
| CD228 | MF12, Melanotransferrin | 80-95 | stem, melanomas | iron transport | iron, pro-UPA, plasminogen |
| CD229 | Ly-9 | 95, 110 | T, B | adhesion, costimulation, homophilic interaction | CD229 |
| CD230 | PRNP, Prion protein | 35 | neurons, FDC | protects cells from apoptosis | |
| CD231 | TSPAN7, TALLA-1 | 30-45 | T leukemias, neuroblastomas, brain neurons | marker for T-ALL | |
| CD232 | PLXNC1, VESP-R | 200 | B, NK, DC, neuronal cells, monocytes, granulocytes | associates with CD108 and poxvirus semaphorin-like protein A39R | |
| CD233 | Band 3, SLC4A1, EPB3 | 90 | erythrocytes | anion exchanger pump, transport of CO2, linking red cell membrane to cytoskeleton | |
| CD234 | Duffy, DARC | 35-45 | erythrocytes, endothelial, epithelial | chemokine decoy receptor | CXCL1, CXCL5, CXCL8, CCL2, CCL5, CCL7 |
| CD235a | Glycophorin A | 36 | erythrocytes, HSC | major sialoglycoproteins of the erythrocyte membrane, antigenic determinants for the MN and Ss blood groups | CD170, influenza virus, erythrocyte binding antigen (EBA-175) of Plasmodium falciparum |
| CD235b | Glycophorin B | 20 | erythrocytes | major sialoglycoproteins of the erythrocyte membrane, antigenic determinants for the MN and Ss blood groups | |
| CD236 | Glycophorin C/D | 32, 23 | erythrocytes, stem cell subset | Gerbich blood group antigen | |
| CD236R | Glycophorin C | 32 | erythrocytes, stem cell subset | Gerbich blood group antigen | |
| CD238 | Kell | 93 | erythrocytes, stem cell subset | zinc endopeptidase | |
| CD239 | B-CAM | 78-85 | erythrocytes, stem cell subset, fibroblasts | adhesion, signaling | laminin α5 chain |
| CD240CE | Rh30CE, RHCE | 30-32 | erythrocytes | Rh blood group system | |
| CD240D | Rh30D, RhD, RH1 | 30-32 | erythrocytes | Rh blood group system | |
| CD241 | RhAg, Rh50 | 50 | erythrocytes | complex with CD47, LW, glycophorin B | |
| CD242 | ICAM-4 | 42 | erythrocytes | adhesion, Landsteiner-Wiener blood group | CD11a/CD18, CD11b/CD18, CD51, CD29, integrin β5 |
| CD243 | MDR-1, p170, P-gp | 180 | stem cells, endothelial, epithelial | ATP-dependent efflux transporter | |
| CD244 | 2B4, p38 , NKLR2B4 | 70 | T subset, monocytes, basophils, NK | NK activation, T costimulation | CD48 |
| CD245 | p220/240, DY12, DY35 | 220-240 | lymphocytes, platelets, monocytes, granulocytes, NK | signal transduction; costimulation of T and NK | |
| CD246 | ALK | 80 | anaplastic T cell leukemias, small intestine, testis, brain | brain development, implicated in ALK lymphomas | pleiotrophin, midkine |
| CD247 | TCRζ, CD3ζ | 16 | T, NK subset | TCR complex subunit, coupling of antigen recognition to signaling | |
| CD248 | TEM1, Endosialin | 175 | endothelial tissue, stromal fibroblasts | tumor angiogenesis | |
| CD249 | Aminopeptidase A | 160 | epithelial, endothelial | associates with angiotensin II and cholecystokinin-8 | |
| CD252 | OX-40 Ligand, gp34, TNFSF4 | 34 | B, DC, mast, endothelial, cardiac myocytes | T costimulation | CD134 |
| CD253 | TRAIL, APO-2L, TL2, TNFSF10 | 32 | T, DC, B$^{act}$, NK, monocytes | apoptosis | CD261, CD262, CD263, CD264, OPG |
| CD254 | TRANCE, RANKL, TNFSF11 | 35 | lymph node and BM stroma, T$^{act}$, osteoblasts, osteoclasts | osteoclast differentiation, enhances DC stimulation of naïve T proliferation | CD265, OPG |
| CD255 | TNFSF12, TWEAK, APO3L | 18, 30-35 | endothelial cells, smooth muscle, fibroblasts | induces apoptosis, promotes angiogenesis | CD266 |
| CD256 | APRIL, TALL-2, TNFSF13 | 16 | monocytes, macrophages, leukocytes, myeloid | B proliferation, apoptosis | CD267, CD269 |
| CD257 | BLyS, BAFF, TNFSF13b | 31 | DC, monocytes$^{act}$, B, macrophages, myeloid cells | B cell growth factor and costimulator of Ig production | CD267, CD268, CD269 |
| CD258 | LIGHT, TNFSF14 | 28 | T$^{act}$, monocytes$^{act}$ | B cell survival and activation | CD270, LTβR |
| CD261 | TRAIL-R1, DR4, TNFRSF10a | 57 | T$^{act}$ | induces apoptosis via FADD and caspase 8 | CD253 |
| CD262 | TRAIL-R2, DR5, TNFRSF10b | 60 | leukocytes | induces apoptosis via FADD and caspase 8 | CD253 |
| CD263 | TRAIL-R3, DcR1, LIT, TNFRSF10c | 65 | T, B, NK, macrophages, monocytes, granulocytes | inhibits CD253 mediated apoptosis | CD253 |
| CD264 | TRAIL-R4, TRUNDD, DcR2, TNFRSF10D | 35 | T, B, NK, macrophages, monocytes, granulocytes | decoy receptor, inhibits apoptosis | CD253 |
| CD265 | RANK, TRANCE-R, ODFR, TNFRSF11A | 97 | broad expression, DC, osteoclasts | osteoclastogenesis, T-DC interactions | CD254 |
| CD266 | TWEAK-R, FGF-inducible 14, TNFRSF12A | 14 | vascular endothelial and epithelial cells, keratinocyte | cell-matrix interactions and endothelial growth and migration | CD255 |
| CD267 | TACI, TNFRSF13B | 32 | B, myeloma | involved in the stimulation of T cell function | CD256, CD257 |
| CD268 | BAFFR, TR13C, TNFRSF13C | 25 | B, T subset | mature B survival | CD257 |
| CD269 | BCMA, TNFRSF17 | 20 | mature B (membrane and perinuclear), plasma cells | B survival and proliferation | CD256, CD257 |
| CD270 | TNFRSF14, HVEM | 30 | T, monocytes, DC | stimulatory and inhibitory signaling | CD258, CD272, HSV-1, HSV-2 |
| CD271 | NGFR, TNFRSF16 | 45 | neurons (Schwann cells), BM mesenchymal cells, DC subset, monocytes | mediates cell survival as well as cell death | NGF, BDNF, NT-3, NT-4 |
| CD272 | BTLA | 33 | T$^{act}$, B$^{act}$, Th1, macrophages, DC | attenuation of T-cell activation | CD270 |
| CD273 | B7DC, PD-L2, PDCD1L2, PDCD1LG2 | 25 | DC subset, monocytes, macrophages | costimulation or suppression of T proliferation | CD279 |
| CD274 | B7-H1, PD-L1, PDCD1LG1 | 33 | macrophages, epithelial, DC, NK, monocytes$^{act}$, T$^{act}$, B$^{act}$ | costimulation or suppression for T cells | CD279 |
| CD275 | B7-H2, ICOSL, B7-RP1, GL50, ICOSLG | 60 | endothelial, macrophages, DC, T, B, monocytes$^{act}$ | costimulation, cytokine production | CD278 |
| CD276 | B7-H3 | 40-45 | epithelial, NK, monocytes$^{act}$, B, T, DC subset | regulation of T cell-mediated immune response | |
| CD277 | BT3.1, BTF5, BTN3A1 | 56 | B, T, NK, DC, monocytes, endothelial, stem cell subsets | regulator of T cell activation and function | |
| CD278 | ICOS, AILIM | 55-60 | T$^{act}$, Th2 | T costimulation | CD275 |
| CD279 | PD1, SLEB2, PDC1 | 55 | T$^{act}$ , B$^{act}$, thymocytes | associated with apoptosic programmed cell death and the inhibition of T cell proliferation | CD273, CD274 |
| CD280 | UPARAP, MRC2 | 180 | chondrocytes, osteoclasts, osteocytes, endothelial, macrophages | collagen matrix remodeling and endocytic recycling | collagen |
| CD281 | TLR1 | 90 | DC, keratinocytes, macrophages, monocytes, neutrophils | pathogen recognition, activation of innate immunity, associates with CD282 | lipoprotein, lipopeptide |
| CD282 | TLR2 | 90 | monocytes, macrophages, granulocytes, keratinocytes, DC, neutrophils | pathogen recognition, activation of innate immunity, associates with CD281 and CD286 | lipoproteins and glycans |
| CD283 | TLR3 | 100 | fibroblasts, epithelial, myeloid DC (may be intracellular) | pathogen recognition, activation of innate immunity | dsRNA |
| CD284 | TLR4 | 100 | monocytes, DC, macrophages, granulocytes, endothelial, T$^{act}$ | innate immune response to bacterial LPS, associates with MD2 and CD14 | LPS |
| CD286 | TLR6 | 90 | macrophages, monocytes, epithelial, endothelial | innate immune response to bacterial LPS, associates with MD2 and CD14 | LPS |
| CD288 | TLR8 | 110 | leukocytes, monocytes, DC | pathogen recognition, activation of innate immunity | bacterial diacyl-lipopeptides |
| CD289 | TLR9 | 120 | pDC (intracellular), B$^{act}$ | pathogen recognition, activation of innate immunity | CpG-DNA |
| CD290 | TLR10 | 90 | pDC, B$^{act}$ | pathogen recognition, activation of innate immunity | |
| CD292 | BMPR1A, ALK3 | 57 | bone progenitor cells, chondrocytes, epithelial | bone development | BMP-2, BMP-4 |
| CD293 | BMPR1B, ALK6 | 57 | epithelial, mesenchymal and bone progenitors | bone development | BMP-7, GDF5 |
| CD294 | CRTH2. GPR44 | 55-70 | Th2, eosinophils, basophils | stimulatory effects on Th2, allergic inflammation | binds prostaglandin D2 |
| CD295 | LeptinR, LEPR | 132 | hematopoietic cells | adipose metabolism, immune dysfunction in obesity | leptin |
| CD296 | ART1, RT6, ART2 | 37 | heart and skeletal muscle, T subset, NK, neutrophils, epithelial | ADP ribosylation of target proteins, associates with PDGFβ, integrins and defensin | |
| CD297 | ART4, dombrock blood group, DOK1 | 38 | erythroid, T, monocytes$^{act}$ | ADP ribosylation of target proteins | |
| CD298 | ATP1β3 | 52 | all leukocytes | transport sodium and potassium ions across membrane | |
| CD299 | DC-SIGN-related, LSIGN, DC-SIGN2, CLEC4M | 45 | endothelial subset | pathogen recognition receptor | CD50, HIV-1 gp120 |
| CD300a | CMRF35H, IRC1, IRp60 | 60 | T subset, B, monocytes, mast, granulocytes, NK, neutrophils, DC | proposed inhibitory receptor | |
| CD300c | CMRF35A, LIR | 23 | monocytes, neutrophils, NK, DC, B and T subsets | proposed activating receptor | |
| CD300e | CMRF35L | 45 | monocytes, macrophages, neutrophils | proposed activating receptor | |
| CD300f | IREM1, MAIR-V | 60 | myeloid | inhibitory receptor | |
| CD301 | MGL, HML, CLEC10A | 38 | immature DC, macrophages | uptake of glycosylated antigens | |
| CD302 | DCL1, BIMLEC | 19-28 | macrophages, granulocytes, monocytes, DC | fusion protein in Hodgkin's lymphoma with CD205 | |
| CD303 | BDCA2, HECL | 38 | pDC, neutrophils, macrophages | inhibit IFN-α/β production | |
| CD304 | BDCA4, neuropilin 1, NRP1 | 130 | neurons, Treg, DC, endothelial | angiogenesis and cell survival, migration and invasion | semaphorin-3A, vascular endothelial growth factor A, plexin-1 |
| CD305 | LAIR1 | 32-40 | NK, B, T, monocytes, DC | inhibitor of cell function | |
| CD306 | LAIR2 | 16 | monocytes, T | soluble, mucosal tolerance, thought to inhibit cellular activation and inflammation | |
| CD307a | FCRL1 | 55-105 | B subset, B lymphoma | regulating B cell activation, development and differentiation | |
| CD307b | FCRL2 | | B subset | may have a regulatory role in normal and neoplastic B cell development | |
| CD307c | FCRL3 | | B subset | may play a role in regulation of the immune system | |
| CD307d | FCRL4 | | B subset | may function as an inhibitor of the B cell receptor signaling | |
| CD307e | FCRL5 | | B subset | may be involved in B cell development and differentiation | |
| CD309 | VEGFR2, KDR | 230 | endothelial, megakaryocytes, platelets, primitive stem cell subsets | regulates adhesion and cell signaling, angiogenesis | VEGF |
| CD312 | EMR2 | 90 | monocytes, macrophages, monocyte-derived DC | cell adhesion and migration for phagocytosis | chondroitin sulfate, glycosaminoglycan, CD55 |
| CD314 | NKG2D, KLRK1 | 42 | NK, T subset | activates cytolysis and cytokine production, costimulation | MICA, MICB, ULBP1, ULBP2, ULBP3 |
| CD315 | CD9P1, SMAP6, FPRP, PTGFRN | 135 | B subset, monocytes$^{act}$, endothelial, epithelial | associates with CD81 and CD9, regulates cell motility and polarity | |
| CD316 | EWI2, PGRL, CD81P3, KASP, IGSF8 | 63-75 | B, T, NK | associates with CD81 and CD9 | |
| CD317 | BST2, HM1.24 | 30-36 | B, T, NK, monocytes, DC, BM stromal cells | B cell growth and development | |
| CD318 | CDCP1, SIMA135 | 135 | HSC (subset of CD34+), epithelial | cell adhesion with ECM | |
| CD319 | CRACC, SLAMF7 | 66 | B$^{act}$ and DC subset, NK | regulates T and NK cells | CD319 |
| CD320 | 8D6A, 8D6 | 30 | FDC, germinal centers | development of germinal centers and proliferation of B cells | |
| CD321 | JAM1, F11R | 35 | endothelial, epithelial, erythrocytes, platelets, neutrophils, monocytes, lymphocytes | formation of tight junctions | CD11a/CD18, reovirus |
| CD322 | JAM2, VE-JAM | 43 | HEV, endothelial, B, monocytes, T subsets | cell adhesion, lymphocyte homing to secondary lymphoid organs, formation of tight junctions | PAR-3, CD49d/CD29 |
| CD324 | E-Cadherin, CDH1 | 120 | non-neural epithelial, stem cells, erythroblasts, keratinocytes, trophoblasts, platelets | cell adhesion, homotypic interaction | CD103, PS1, catenins, internalin |
| CD325 | N-Cadherin, NCAD, CDH2 | 140 | endothelial , stem cells, muscle cells, osteoblasts, neurons, BM stromal cells | forms a complex with catenins that is linked to the actin cytoskeleton | N-Cadherin, catenins, FGFR, PS1 |
| CD326 | EpCAM, TACSTD1 | 35-40 | epthelial | cell adhesion, metastatic carcinoma cell marker | CD305, CD306 |
| CD327 | SIGLEC6 | 49 | placenta, spleen, B, neutrophils, granulocytes trophoblasts | adhesion, cell-cell interactions | sialyl-Tn motifs, leptin |
| CD328 | SIGLEC7, AIRM-1 | 75 | resting and activated NK, granulocytes, monocytes, T | may inhibit regulation of T cell and NK cell activation | α2,3- and α2,6-linked sialic acid |
| CD329 | SIGLEC9 | 50 | neutrophils, monocytes | negative regulation of immune responses | α2,3- and α2,6-linked sialic acid |
| CD331 | FGFR1, Fms-like tyrosine kinase-2, KAL2, N-SAM | 30 | fibroblasts, epithelial, endothelial | cell division, regulation of cell growth and maturation, formation of blood vessels | aFGF, bFGF |
| CD332 | FGFR2, BEK, KGFR | 115-135 | fibroblasts, epithelial, mesenchymal cells | cell division, regulation of cell growth and maturation, formation of blood vessels | aFGF, bFGF |
| CD333 | FGFR3, ACH, CEK2 | 115 | fibroblasts, epithelial | cell division, regulation of cell growth and maturation, formation of blood vessels | aFGF, bFGF |
| CD334 | FGFR4, JTK2, TKF | 110 | lymphocytes, macrophages, fibroblasts, skeletal muscle, epithelial | cell division, regulation of cell growth and maturation, formation of blood vessels | aFGF, bFGF |
| CD335 | NKp46, NCR1 | 46 | NK | delivers activating signals via association with CD3ζ | viral HA, heparan sulfate proteoglycans |
| CD336 | NKp44, Ly-95 homolog, NCR2 | 44 | NK | delivers activating signals via association with DAP12/ KARAP | viral HA |
| CD337 | NKp30, Ly-117, NCR3 | 30 | NK | delivers activating signals via association with CD3ζ | membrane-associated heparan sulphate proteoglycans |
| CD338 | ABCG2, BCRP, Bcrp1, MXR | 73 | stem cell subset (side population) | multi-drug resistance transporter, transport of molecules across cell membranes | |
| CD339 | Jagged-1, JAG1, JAGL1, hJ1 | 135 | BM stroma, epithelial | cell fate decisions during hematopoiesis | Notch 1, Notch 2, Notch 3 |
| CD340 | HER2/neu, ERBB2, p185HER2 | 185 | BM, mesenchymal stem, tumor | member of the ERBB family of receptor tyrosine kinases | |
| CD344 | FZD4, frizzled-4, Fz-4, hFz-4, FzE4 | 59 | adult kidney, lung, brain, liver, neuronal progenitors | activation of the Wnt/β-catenin pathway | Wnt, norrin |
| CD349 | FZD9, frizzled-9, Fz-9, hFz-9 | 65 | adult and fetal brain, testis, eye, skeletal muscle, kidney, BM mesenchymal stem | activation of the Wnt/β-catenin pathway | Wnt-2, Wnt-7a. |
| CD350 | FZD10, frizzled-10, Fz-10, hFz-10 | 65 | placenta and kidney; fetal lung and brain | activation of the Wnt/β-catenin pathway | Wnt |
| CD351 | Fca/mR, FCAMR | 58 | | | IgA, IgM |
| CD352 | SLAMF6 | | NK, T, B | enhances cytokine production and proliferation | |
| CD353 | SLAMF8, BLAME | | monocytes, macrophages, B, DC | | |
| CD354 | TREM-1 | | monocytes, macrophages, neutrophils, granulocytes, DC, NK | associates with DAP12, mediates pro-inflammatory signaling | |
| CD355 | CRTAM | | NK$^{act}$, CD8 T$^{act}$, B | adhesion | Necl-2 |
| CD357 | TNFRSF18, GITR, AITR | | T$^{act}$, Treg | participates in dominant immunological self-tolerance | TNFSF18 |
| CD358 | TNFRSF21 | | hematopoietic and non-hematopoietic cells, tumor cells | apoptosis | APP |
| CD360 | IL-21R | | NK, monocytes, granulocytes, B, T | associates with CD132, activation, proliferation, development, apoptosis | IL-21 |
| CD361 | EVI2b, EVDB | | widely expressed in hematopoietic cells | | |
| CD362 | Syndecan-2 | | granulocytes, monocytes, T subset, B subset | adhesion, migration | CD267 |
| CD363 | S1PR1 | | NK, B, T | adhesion, migration, cytoskeletal organization | S1P |

**Human CD Antigens**
For information on CD antibody listings, fluorophore conjugations and availability from eBioscience, visit **ebioscience.com/human-cd-chart**

Q310070h_CDAntigens

FSC 100% From well-managed forests
www.fsc.org
© 1996 Forest Stewardship Council

Human CD Antigens

eBioscience®
www.eBioscience.com

NORTH AMERICA: CUSTOMER SERVICE 888.999.1371 • info@eBioscience.com | TECHNICAL SUPPORT 888.810.6168 • tech@eBioscience.com || EUROPE: CUSTOMER SERVICE +43 1 796 40 40-304 • europe@eBioscience.com | TECHNICAL SUPPORT +43 1 796 40 40-120 • tech@eBioscience.com
Customers in countries where direct sales are not available may contact their eBioscience distributor listed at www.eBioscience.com/distributors