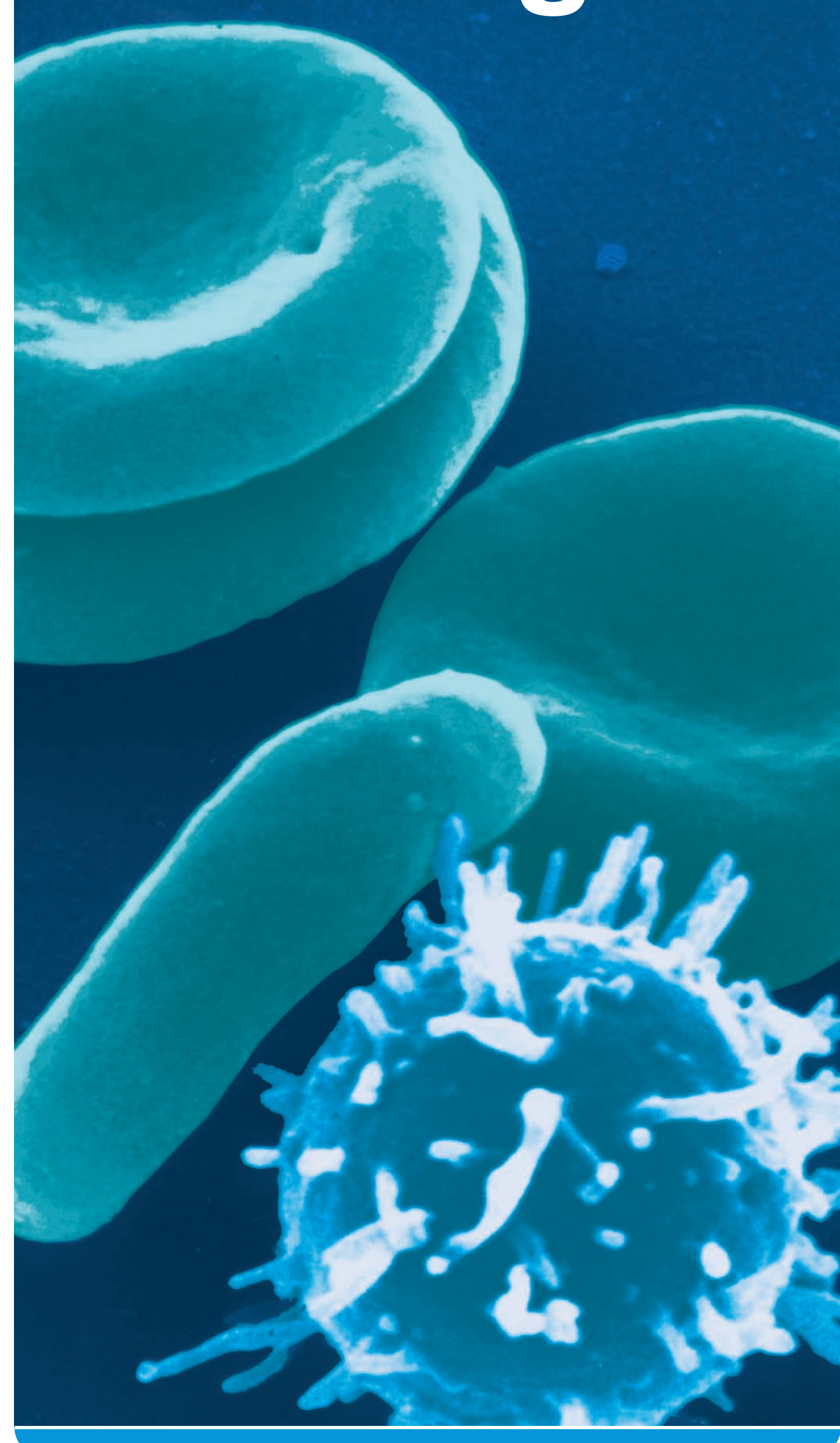


CD Antigens



Text & Colour Key:

Text abbreviations:

Baso	Basophils
Endo	Endothelial cells
Eos	Eosinophils
Epil	Epithelial cells
Ery	Erythrocytes
ESC	Embryonic stem cells
FDC	Follicular dendritic cells
FB	Fibroblasts
Gran	Granulocytes
HSC	Hematopoietic stem cells
Lk	Leukocytes
Lph	Lymphocytes
Mac	Macrophages
Megak	Megakaryocytes
Mon	Monocytes
Neu	Neutrophils
NK	Natural killer cells
Plt	Platelets
Cyt	Cytotoxic T cells
Th	Helper T cells
Thy	Thymocytes

Key to Conjugations:

Text Colour	Conjugation
Blue	Allophycocyanin
Green	Phycoerythrin
Red	Biotin
Black	Unconjugated

Key to Research Topics:

Text Colour	Topic
Blue	Immunology
Green	Stem Cells
Red	Neuroscience
Black	Endothelial
Grey	Cancer

www.abcam.com/CDmarkers

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CD Antigen	Abcam antibodies www.abcam.com/ab...	Cellular expression	Functions	*Reported markers of...
CD1a	27962, 28262, 27951, 718	Cortical thy, Langerhans, DC	Non-peptide Ag presentation	Thymus - marks T cells at the short cortical thymic stage of differentiation
CD1b	23992	Cortical thy, Langerhans, DC	Non peptide Ag presentation	Cortical thy
CD1c	18216	Cortical thy, Langerhans, DC, B cell subset	Non peptide Ag presentation	Myeloid DC 1; cortical thy
CD1d	11076	Intestinal epi, B cell subset, DC	Non peptide Ag presentation	
CD1e	General CD1 antibodies: 24377, 25559, 24537, 24686	Mac	Non peptide Ag presentation	
CD2	27995, 28241, 27954, 34250	Thy, NK cells, T and B cells	Adhesion; T cell activation	Pan T cells (with CD4+ suppressor/inhibitor T cells); with CD8+ cytotoxic/suppressor T cells; NK cells
CD3	26497, 27340, 27331, 33429, 3985	Mature T cells, thy	Signaling T cell activation; regulation of TCR expression	Pan T cells (with CD4+ suppressor/inhibitor T cells); with CD8+ cytotoxic/suppressor T cells; NK cells
CD4	48391, 21418, 33437, 34271, 23803	Thy, T cells, T helper/inducer and regulatory cells, mono, mac	T cell activation; thymic differentiation; HIV receptor	T cell activation; thymic differentiation; HIV infection; subcutaneous and cortical thy; CD4+ medullary thy subset (with CD8+ cytotoxic/suppressor T cells); subcutaneous thy
CD5	25280, 24500, 24673, 25161, 36466	Thy, T and B cell subset, B-CLL	Regulates T cell-B cell lymphocyte interaction	Pan T cells (with CD4+ suppressor/inhibitor T cells); with CD8+ cytotoxic/suppressor T cells; NK cells
CD6	34200, 33762, 9181, 49903, 22381	Thy, T and B cell subset, neuron subset	Thy development; T cell activation	T and B lgh; a potential marker of T cell activation
CD7	1158, 27324, 24220, 8236, 16042	Thy, T cells, NK cells, pluripotent HSC, thy	T cell costimulation	Thy, T cells (with CD4+ suppressor/inhibitor T cells); with CD8+ cytotoxic/suppressor T cells; Thy; pluripotent HSC
CD8	26034, 34153, 25417, 34282, 34364	Thy subset		Thy subset (when used in conjunction with other thy markers)
CD8a	25499, 25670, 25498, 25167, 25478, 33788	Thy subset, Tc cells, NK cells, DC subset	Co-receptor for MHC class I molecules	Co-receptor for MHC class I molecules
CD8b	21246, 21247, 21245, 41328, 21248	Thy subset, Tc cells	Co-receptor for MHC class I molecules	Co-receptor for MHC class I molecules
CD9	34162, 34161, 2215	Pit, aB cells, eos, baso, activated T cells, endo and epi cells	Cell adhesion and migration; platelet activation	ESC; pit; baso; mono
CD10	28098, 27385, 32526, 34199	B and T cell precursors, fb, neu, bone marrow stromal cells	Peptidase; regulates B cell growth	Neurogenic/lymphoid stem cells; neu; bone marrow stromal cells
CD11a	19870, 29500, 29510, 42899	Lk, lph, gran, mono and mac	Intracellular adhesion and costimulation	Mono and mac
CD11b	25492, 24674, 25175, 24544, 4332	Gran, mono, NK cells, T and B cells, DC	Cell adhesion; apoptosis; chemotaxis	Mac; neurogenic/lymphoid stem cells; gran; monocyte
CD11c	42800, 33485, Mono, mac, gran, T and B cell subset		Cell adhesion	Marker for CD11c subset of myeloid cells; Lk
CD11d	46862, 46863, 29723, 7417	Gran, mono (p precursors), endo, epi cells	Zinc binding metalloproteinase	Mono and mac; endo progenitors
CD14	25620, 16174, 16175, 21489, 8103	Mono, mac, (myelomonocytic cells) Langerhans, gran	Receptor for complex of LPS and LBP	Endo progenitors; granulocytic mono; cancers - Reed-Sternberg cells of Hodgkin's disease. CD14 T cell lymphomas including monocyte fungoides and on some leukemias
CD15	42751, 28103, 20137	Gran, mono, neu, eos	Cell adhesion	Endo progenitors; granulocytic mono; cancers - Reed-Sternberg cells of Hodgkin's disease. CD15 T cell lymphomas including monocyte fungoides and on some leukemias
CD16	46855, 46860, 52047, 664	Neu, NK cells, mac	Low affinity Fc receptor; mediates phagocytosis and ADCC	Gran; neu; NK cells; mac
CD17	1902			Gran; neurobaso
CD18				
CD18a	49111, 52046, 25489, 30190, 8220	Mono, pit, B cell subset, gran, DC, T cells, pit, neu	Lactadherin; cell surface glycoprotein	Pit
CD18b	49111, 52046, 25489, 30190, 8220	Mono, pit, B cell subset, gran, DC, T cells, pit, neu	Lactadherin; cell surface glycoprotein	Pit
CD19	49111, 52046, 25489, 30190, 8220	Mono, pit, B cell subset, gran, DC, T cells, pit, neu	Lactadherin; cell surface glycoprotein	Pit
CD20	25642, 21790, 46896, 25910, 32006	T and B cell subset	B cell activation and proliferation	B cell activation and proliferation
CD21	24287, 25355, 24827, 24982	Mature B cells, FDC, T cell subset	Signal transduction	Pho and pre B lgh; FDC
CD22	25627, 25671, 25389, 21500, 29338	Mature B cells	B cell adhesion; signal transduction	B cell adhesion; signal transduction
CD23	25487, 46905, 24999, 24587, 24201, 25658, 25658, 31822	Mature B cells, activated mac, eos, FDC, pit	Low affinity receptor for IgE; ligand for CD19, CD71 and CD81	Low affinity receptor for IgE; ligand for CD19, CD71 and CD81
CD24	51538, 2597, 25646, 25658, 31822	B cells, gran, epi cells, mono	Regulates B cell proliferation and differentiation	Pancreatic cancers; Pro B lgh; neurobaso
CD25	30359, 30360, 42927, 3154	Mature Th, T cells (constituted on activation), activated B cells, NK cells, epi cells, mac	Exoprotease; HIV pathogenesis	Gran; mono and T cells; mac
CD27	30356, 30367, 10456	T cells, medullary thy, B cell subset, NK cells	Costimulation of T cell and B cell activation	B cell malignancies
CD28	25498, 24009, 25607, 25178, 13403	Mon, pit, B cells, thymic plasma cells, activated B cells	Costimulation	Activated B cells
CD29	38468, 2384, 30083, 23625, 7168	Lk	Interacts with CD49a in VLA-1 integrin	Activated B cells
CD30	24176, 25187, 25186, 23766	Activated T and B cells, mono, activated NK cells, Reed-Sternberg cells	Regulates lymphocyte proliferation and cell death. Has a critical role in the pathophysiology of Hodgkin's disease and other CD30+ lymphomas.	ESC; activated T and B cells; cell surface antigen of Hodgkin's and Reed-Sternberg cells
CD31	25583, 23359, 25644, 7389, 7388	Mono, pit, gran, endo, lgh subset, epi cells	Cell adhesion	Neurogenic/lymphoid stem cells; pit; mono and mac; gran
CD32	30356, 30357, 30355, 49143	B cells, mono, gran, pit, endo cells	Regulation of B cell function; induces phagocytosis and mediator release	Mono and mac; neu
CD33	21892, 20371	Mon, gran, mast cells, myeloid progenitors	Lectin affinity; adhesion	Myeloid cells; mono
CD34	18228, 4694, 46970, 21252, 8158	HSC and progenitors, capillary endo cells	Cell adhesion (via L-selectin)	Pho and pre B lgh; eryth; stem cell and endo progenitors
CD35	51697, 25	Eryth, B cells, mono, neu, eos, FDC, T cells subset	Scavenger receptor; mediates adhesion and phagocytosis	Mac; neuro; T cells (with CD4+ suppressor/inhibitor T cells)
CD36	48311, 51596, 39024, 36978, 17044	Plt, mononuc, endo and thyroid precursors	C/EBP-gamma receptor; mediates adhesion and phagocytosis	Endo progenitors; pit; mono and mac; gran
CD37	30414, 518, 19701	Mono, pit, NK cells, myeloid cells. Low level of expression in T cells, gran and mono.	Signal transduction	
CD38	25041, 26979, 24977, 25043, 2977	Variable expression levels on most hematopoietic cells. High levels on plasma cells, early T and B cells, activated T cells, germinal centers B cells	Regulates cell activation, proliferation and adhesion	Immature and activated B and T cells; plasma cells; mono; baso; Thy; neurogenic/lymphoid stem cells
CD39	30423, 30424, 3042	Mac, Langerhans, DC, activated B cells, NK cells, myeloid cells, DC	B cell adhesion; protects activated cells from lysis	Neurogenic/lymphoid stem cells
CD40	25627, 27281, 28270, 27827, 28298	B cells, mononuc, FDC, endo, fb, keratinocytes	Costimulation of B cell growth; differentiation and isotype switching	Mono
CD41	16887, 18908, 30434, 15021	Pit, megak	PII adhesion and aggregation	
CD42a	30408, 30399, 32397, 19729	Pit, megak	PII adhesion and aggregation	Pit
CD42b	30401, 30402, 30403, 2878	Pit, megak	PII adhesion and aggregation	Pit
CD42c	22773	Pit, megak	PII adhesion and aggregation	Pit
CD43	48727, 32833, 13471, 28154, 8688	(B except resting B cells). Low expression in pit	Anti-adhesion; binds CD45 to mediate cell-cell interactions	Mono; granulobasos; T cells (with CD4+ suppressor/inhibitor T cells); with CD8+ cytotoxic/suppressor T cells
CD44	25451, 18228, 23224, 25171, 8124	Hematopoietic and non-hematopoietic cells (not pit)	Lk rolling, homing and aggregation. Adhesion in B to endo cells, stromal cells, and the extracellular matrix.	Mac; neurogenic/lymphoid stem cells; eryth
CD45	25819, 27287, 29003, 19059, 8216	Hematopoietic cells (not eryth and pit)	Critical for T cell and B cell receptor mediated activation	Lk; hematopoietic progenitors
CD45RB	28311, 20200, 25647, 28110, 8218	B and T cell subset (naive T, medullary thy)	Critical for T cell and B cell receptor mediated activation	Naive T cell subsets; B cell subsets; mono
CD45RC	28311, 20200, 25647, 28110, 8218	B cells, NK cells, CD8+ T cells, subset of CD4+ T, medullary thy, mono, DC	Critical for T cell and B cell receptor mediated activation	Mono and mac
CD45RO	51664, 19756, 19741, 23	T and memory T and B cells subset, mononuc, gran, cortical thy, DC subset	Critical for T cell and B cell receptor mediated activation	Mono and mac; gran; helper/inducer T cells
CD46	28068, 28014, 28067, 789	Lk, pit, endo cells, epi cells, Placental trophoblasts, sperm and some tumor cells, hematopoietic and non-hematopoietic nucleated cells	Co-factor for factor D proteolytic cleavage of C3b and C4b; sets protective barrier threshold against inappropriate complement activation	
CD47	33960, 33963, 48517, 8099	Hematopoietic cells, epi cells, endo cells, mesenchymal cells	Adhesion	
CD48	48214, 61599, 30478, 28111, 9185	Lk	Cell adhesion; T cell costimulation	T cells (with CD4+ suppressor/inhibitor T cells); with CD8+ cytotoxic/suppressor T cells
CD49	33672, 31401, 34445	Activated T cells, mono, melanoma cells, endo cells	Adhesion; embryo development	
CD49b	44460, 30498, 42776, 30485, 30487	Pit, B cells, mono, activated T cells, epi cells, endo cells, NK cell subset, megak	Cellular lectin aggregation; receptor for echovirus 1	NK cells; pit; mono; activated T cells
CD49c	30488, 30498, 20140	Most adhesion cell lines. Low expression on B cells, NK cells	Adhesion and signal transduction	
CD49d	25796, 25666, 24944, 220	T and B cells, thy, mono, eos, baso, NK cells, mast cells, DC, erythroid precursors	Adhesion; cell migration, homing and activation	T cells (with CD4+ suppressor/inhibitor T cells); with CD8+ cytotoxic/suppressor T cells; erythroid precursors
CD49e	23815, 28461, 25189, 24694	Thy, T cells, mono, pit, early and activated T cells, endo cells, epi cells	Adhesion; regulation of cell survival and apoptosis	Mono; activated T cells

CD Antigen	Abcam antibodies www.abcam.com/ab...	Cellular expression	Functions	*Reported markers of...
CD49f	30498, 30497, 28580, 20142	Memory B cells, T cells, thy, mono, pit, megak, epi, endo, cytotrophoblasts	Adhesion and cell migration; embryogenesis	ESC; mono; pit; activated T cells
CD50	47029, 42957, 21895, 10804	Lk, thy, Langerhans, endo cells, T and B cells, gran, mono	Adhesion and costimulation	
CD51	33078, 48520, 34226	Pit, activated T cells, endo cells, osteoblasts, melanoma cells, megak	Adhesion; signal transduction	
CD52	33983, 36443, 2576	Thy lgh (not plasma cells), mononuc, epi cells	Glycosylphosphatidylinositol (GPI) anchored antigen which may play a role in carrying and orienting carbohydrate	Gran
CD53	33864, 667	Lk, DC, osteoblasts, osteoclasts	Signal transduction	
CD54	24869, 26563, 25037, 2213	Endo cells, hematopoietic and non-hematopoietic cells	Regulates complement activation; ligand or protective molecule in fertilization; signal transduction	Endo cells
CD55	29634, 28540, 29535, 1422	Neural tissue, NK cells, T cell subset, small cell lung carcinoma	Hemostatic and heretropic adhesion	Neurogenic/lymphoid stem cells
CD56	46524, 7169, 46522, 19774, 9272	Neural tissue, NK cells, T cell subset, small cell lung carcinoma	Adhesion	NK subsets
CD57	25605, 25677, 25614, 8997	NK cell subset, T cell subset, mono	Hemostatic and heretropic adhesion	NK subsets
CD58	20006, 27301, 21897, 1420	Lk, eryth, epi cells, endo cells, fb, hematopoietic and non-hematopoietic cells	APC-1 killer target cell interaction; costimulation	
CD59	36467, 15666, 42788, 28114, 9182	Hematopoietic and non-hematopoietic cells	Prevents complement polymerization; protects cells from complement mediated lysis	Hematopoietic stem cells; eryth
CDw60	22384, 25755	Subset of CD4+ and CD8+ peripheral T cells, pit, mono	Costimulation of T cells	Pit
CD61	33271, 33272, 19784, 7167	With CD41 on pit, with CD81 on mac, endo, fb, megak, osteoclasts, mast cells	Mediates cell adhesion to diverse matrix proteins	Megak; pit; endo
CD62E	51241, 13481, 51250, 8638	Activated endo cells	E-Selectin; Lk rolling; tumor cell adhesion; angiogenesis	Endo progenitors
CD62L	41459, 24876, 29600, 3920	B and T cell subset, mono, gran, NK cells, thy	L-selectin; Lk rolling and homing	Naive/effector memory T cells
CD62P	33279, 42795, 6632	Activated endo cells	Lk tethering and rolling	
CD63	19177, 18236, 1318	Activated pit, mono, mac, gran, endo cells	Translocated to cell surface on activation of pit, endo cells and gran. Associated with the early stages of melanoma progression (regulation of motility and adhesion of melanoma cells)	Pit, endo cell, and gran activations; melanoma; mac; melanoma - involved in early stages of melanoma tumor progression
CD64	34224, 23860, 27308, 6048	Mono, mac	High affinity receptor for IgG	Mono and mac; activated neu, eos and baso
CD65	51913, 51912	Gran, myeloid cells. Low expression on mono	Useful for studies of stages of myeloid cell proliferation	Activated neu, eos and baso
CD66	51969, CD66a,c,e	Mature gran, epi cells, hematopoietic tissues, neu, cancer and liver	Homophilic and heterophilic adhesion; neurophil activation	Gran; neu; NK cells; mac
CD66b	51534, 48589	Gran	Cell adhesion; neurophil activation	Gran
CD66c		Neu	Neu activation	Neu
CD66e		Adult colon epi, colon carcinoma	Homophilic and heterophilic adhesion	
CD66f		Epithelial, placental syncytiotrophoblasts, fetal liver	Immune regulation and protection of fetus from maternal immune system; progeny specific glycoprotein	
CD68	955	Mac, mono, neu, baso, DC, myeloid progenitors	Possibly has a role in phagocytic activities of tissue mac, both in intracellular lysosomal metabolism and extracellular cell-cell and cell-particle interactions; binds to tissue and organ-specific lectins or selectively, allowing homing of macrophages to sites of inflammation; re-internalization of CD68 from endosomes and lysosomes to the plasma membrane; may allow mac to crawl over selection bearing substrates or other cells	Mac; mono and macrophages
CD69	24846, 26370, 25038, 51862	Activated K, NK cells, thy subset, pit, Langerhans, activated mac	Signal transducing receptor	Activated mac; T and B cells; NK cells
CD70	24538, 21950	Activated B and T cells, regulatory T cells, B cells, DC, endo cells	Induces proliferation of costimulated T cells; enhances the generation of T cells and contributes to T cell activation. This cytokine is also reported to play a role in regulating B cell activation, cytotoxic function of NK cells and immunoglobulin synthesis	Activated B and T cells
CD71	33996, 25622, 7350, 8568	Proliferating cells, reticulocytes, erythroid precursors, activated K, B and T cells, mono, FDC, epi and endo cells	Transferrin receptor - controls iron uptake during cell proliferation	Erythroid cells; mac; activated B and T cells
CD72	33286, 18221, 8091	B and T cells, activated B cells, FDC, epi and endo cells	Yap adhesion and proliferation	Pho and pre B lgh
CD74	54213, 49782	B cells, activated T cells, mono, Langerhans, DC, endo cells, epi cells	Intracellular sorting of MHC class II molecules	Mono and mac
CDw75	33287	B cell subset, activated T cells, mono	Cell adhesion	
CD77	19795	Germinal center B cells, mac. High expression in B cells thy	Induces apoptosis	
CD78	24151	B cells (expression increases on B cell activation), tissue mac, epi cells	Expressed as part of the MHC class II molecule	
CD79a	33290, 42798, 712	B cells	Subunit of B cell antigen receptor (CD19/CD79); signal transduction	Pho and pre B lgh; eryth; stem cell and endo progenitors
CD79b	25169, 24009, 25232, 26276, 23826	B cells	Subunit of B cell antigen receptor (CD19/CD79); signal transduction	B cells
CD80	29605, 42003, 42005, 24970, 32003	Activated B and T cells, mac, DC	Costimulation of T cell activation and proliferation	Activated B cells
CD81	24940, 29513, 25675, 33897	T and B cells, NK cells, mono, thy, DC, endo cells, fb	Signal transduction	
CD82	27338, 47068	Lk (up-regulation on activation), pit	Signal transduction	
CD83	48245, 48143, 48300, 49324	Activated T and B cells, circulating DC, Langerhans	Regulates immune response	
CD84	33217, 33218, 3202	Mature B cells, T cell subset, mononuc, pit, endo cells	Homophilic adhesion molecule; enhances T cell activation and cytokine production	HSC; pit; mono;
CD86	25656, 24802, 25694, 25239, 53004	Mono, activated B and T cells, endo cells, fb, hepatocytes	Costimulation of T cell activation and proliferation	Mono; activated B cells
CD87	27423, 3129	Gran, mono, DC, astrocytes	Cell chemotaxis; adhesion	Mono and mac; gran; activated T cells; endo cells, fb, hepatocytes
CD88	33951, 71692, 54376, 12862	Gran, mono, DC, astrocytes	Gran activation	Reactive astrocytes and microglia; mac; gran
CD89	33221, 33211, 22820	Mono, mac, gran, neu, B and T cell subset	Induces phagocytosis, degradation and respiratory burst	Gran
CD90	25322, 25672, 24954, 8872	Hematopoietic cells, neurons, fb, stromal cells, HEV endo cells, mouse T cell subset	Costimulation of lgh; possible inhibition of stem cell and neuron differentiation	Hematopoietic/lymphoid stem cells; neurons
CD91	33201, 34054, 33205, 28820	Mono, mac, neurons, fb</		