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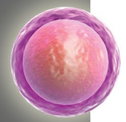
CD antigens

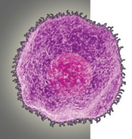
T cell

CD3 CD45RO
CD4 CD62L
CD8 CD69
CD25 CD117
CD27 CD127
CD38 CD196
CD44 CD197



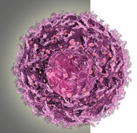
Treg Cell

CD3 CD62L
CD4 CD73
CD25 CD103
CD39 CD223



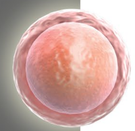
NK cell

CD3 CD38
CD16 CD56
CD30 CD335 (NKp46)
CD31



B cell

CD19 CD27
CD20 CD38
CD22 CD45R (B220)
CD24 CD69
CD25



Mouse

Antigen	Function	Distribution	Alternative Names	Available Clone
CD1D	Glycolipid and lipid antigen presentation, mucosal immunity	leukocytes, Lanerhans, intestinal epithelial	Ly-38, CD1.1, CD1, CD1.2	1B1
CD2	T activation, adhesion	thymocytes, erythrocytes, myeloid, B, NK, T,	Ly-37, LFA-2, T11	RM2-5
CD3e	TCR expression, signaling T activation	Thymocyte subset, mature T	T3, CD3 epsilon, CD3, CD3g	145-2C11, 17A2
CD4	HIV receptor, T activation, thymic differentiation	Macrophage, Monocyte, Thymocyte subset, Treg	L3T4, T4	GK1.5, RM4-5
CD8a	Signal transduction, T differenti-ation, MHC class I receptor	T subset, NK, DC	T8, Ly-8, Lyt-2, CD8 alpha, Ly-2, Ly-35	2.43, 53-6.7
CD8b	Signal transduction, T differenti-ation, MHC class I receptor	T subset, NK, DC	Lyt3, Ly-3	H35-17.2
CD11a	T costimulation, adhesion	B, T, Macrophage, Monocyte, NK, granulocyte, DC	Ly-15, Ly-21, integrin aL	M17/4
CD11b	Adhesion	DC, Macrophage, Monocyte, NK, T subset, B subset	Mac-1, Ly-40, integrin alpha M	M1/70
CD11c	Adhesion	DC, Macrophage/Monocyte, NK, T subset, B subset	p150, 95, integrin alphaX, Itgax, CR4	N418
CD14	LPS/LBP receptor	Granulocyte, Macrophage, Monocyte, Langerhans	Mo2, LPS R	Sa2-8
CD16/32	mediates phagocytosis, Fcgamma low affinity receptor, NK activation	NK, mast, macrophage, neutrophils	Ly-17, Fcgr3	2.4G2
CD18	adhesion, signaling	leuokocytes	Integrin beta 2	M18/2
CD19	B activation and differentiation, BCR coreceptor,	B (not plasma), mast, FDC	B4	1D3
CD20	B differentiation and activation	B, T subset	Ly-44, B1, Ms4a2, Bp35	AISB12
CD24	adhesion, B proliferation and differentiation	Macrophage, Monocyte, B, activated T, neurons, epithelial	Nectadrin, Ly-52	M1/69
CD25	forms IL-2 receptor high affinity with b and g chains, low affinity IL-2 binding	Macrophage, Monocyte, activated T, B, T reg, DC subset		PC61.5
CD27	T costimulation	T, B subset, NK subset, medullary thymocytes	T14, Tnfrsf7, S152	LG.7F9, LG.3A10
CD28	T costimulation	T, thymocytes, NK, plasma	T44, Tp44	37.51
CD29	adhesion, embryonic development	leukocytes, fibroblasts, DC, platelets, endothelial,	gpIIa, intergrin beta1	HMb1-1
CD30	lymphocyte proliferation, apoptosis, peripheral tolerance	Activated T, activated B, activated NK	Ki-1, Tnfrsf8	mCD30.1
CD31	adhesion, cell signaling	platelets, granulocyte, endothelial, DC, lymphocyte subset	PECAM-1, pgIIa	390
CD38	B activation, ectoenzyme, ADP-ribosyl cyclase/hydrolase, cell activation and proliferation	B, activated T, thymocyte subset, NK subset, fetal liver	T10, Cd38-rs1	90
CD40	B costimulation and survival, isotype-switching, T-B interaction	B, Macrophage, Monocyte, T subset, DC, endothelial, fibroblasts, keratinocytes	gp39 receptor, Tnfrsf5	HM40-3
CD41	aggregation and platelet activation	platelets, megakaryocytes	gpIIb, Itga2b, CD41b	MWREg30
CD44	leukocyte adhesion and homing, T activation, tumor metastasis		Pgp-1, Ly-24, HERMES	IM7
CD45	leukocyte differentiation and activation, cell signaling, leukocyte marker	leukocytes, not found on platelets and mature erythrocytes	LCA, Ly5	30-F11
CD45.1	cell signaling	leukocytes of the CD45.1 strain, not found on platelets and mature erythrocytes	Ly5.1	A20
CD45.2	cell signaling	leukocytes of the CD45.2 strain, not found on platelets and mature erythrocytes	Ly5.2	104
CD45R	cell signaling	B, activated T, activated NK, LAK	B220	RA3-6B2
CD48	adhesion, costimulation	leukocytes	Blast-1, BCM-1, Sgp-60	HM48-1
CD49b	adhesion, platelet aggregation	B, activated T, NK subset, platelets, monocytes, endothelial	VLA-2a, gpIa	HMa2
CD49d	homing receptor, adhesion, cell migration	B, T, NK, mast, DC, monocytes	VLA-4, integrin alpha 4	R1-2
CD61	mediates cell adhesion to matrix proteins	platelets, megakaryocytes, macrophages, endothelial, mast, fibroblasts	GPIIIa, Integrin beta3, Itgb3	2C9.G3
CD62L	leukocytes homing and rolling	B subset, T subset, monocytes, granulocytes, NK, thymocytes	L-selectin, LECAM-1, LAM-1, MEL-14	MEL-14
CD62P	leukocytes homing and rolling	activatedplatelets, endothelial,	P-selectin, GMP-140	Psel.K02.3
CD69	activation, signaling, costimulation	activated leukocytes, NK, platelets, langerhans	Activation Inducer Molecule, VEA	H1.2F3
CD70	T & B costimulation	activated B, activated T	CD27L, TNFSF7	FR70
CD71	iron uptake, cell activation	proliferating cells, reticulocytes, erythroid precursors	transferrin R, T9	R17 217.1.4
CD80	costimulation, B-T interaction	activated B, activated T, DC, macrophages	B7, B7-1, Ly-53	16-10A1
CD81	signaling, activation, costimulation, proliferation, differentiation	T, B, NK, thymocytes, DC, endothelial, fibroblast, neuroblastomas, melanomas	TAPA-1	EAT2
CD83	costimulation, T response regulation	activated T, mature DC, Langerhans	HB15	Michel17

Antigen	Function	Distribution	Alternative Names	Available Clone
CD86	costimulation, B-T interaction	activated B, activated T, DC, macrophages	B70, B7-2, Ly-58	GL-1, PO3.1
CD90	T activation, adhesion, costi-mulation, neuron differentiation	thymocytes, T, NK, monocytes, fibroblasts, neurons	Thy-1	G7
CD90.2	adhesion, costimulation, neuron differentiation	Thy-1.2 strain: T, NK, monocytes, neurons, fibroblasts, stromal cells	Thy-1.2	30-H12
CD103	lymphocyte homing, activation		HML-1, alphaE integrin	2.00E+07
CD105	adhesion, angiogenesis	fibroblasts, endothelial, activated monocytes, mesenchmal stem	Endoglin	MJ7/18
CD115	monocytic lineage proliferation and differentiation	monocytic progenitors, osteoclasts, neurons	M-CSFR, c-fms, Csf1r	AFS98
CD117	hematopoietic progenitor devel-opment and differentiation	hematopoietic stem and pro-genitors, primordial germ, mast	c-kit, SCFR, Steel factor	ACK2
CD122	lymphocyte development, cell signaling, IL-2R and IL-15Rbeta chain	monocytes, NK, T subsets, B subsets	p70, IL-2Rbeta	TM-beta1
CD127	T and B development, IL-7 R alpha chain	T, B precursors	IL-7R, IL-7Ralpha	A7R34
CD135	myeloid and lymphoid development, R tyrosine kinase	myeloid and primitive B progenitors, hematopoietic progenitors	flt3, FLK2, EMS-like tyr kinase 3	A2F10
CD140a	embryonic development, signaling, proliferation and differentiation	fibroblasts, platelets, glial cells, chondrocytes	PDGF-receptor alpha	APA5
CD140b	embryonic development, signaling, proliferation and differentiation	fibroblasts, platelets, glial cells, chondrocytes	PDGF-receptor beta	APB5
CD144	adhesion	endothelial, stem subset	Cadherin-5, VE-Cadherin	BV13
CD146	adhesion	endothelial, melanoma	MUC18, MCAM, S-endo	P1H12
CD147	adhesion, T activation, embryonic development	erythrocytes, platelets, endothelial, leukocytes	Neurothelin, basigin	RL73
CD150	adhesion, costimulation, Ig production	T, Treg, B, DC	SLAM, IPO-3	9D1
CD152	negative T stimulation	activated T, activated B	CTLA-4, Ly-56	UC10-4F10-11
CD153	T costimulation	activated T, activated B, neutrophils, activate macrophages	CD30L, TNFSF8	RM153
CD154	T activation, B costimulation	activated T, activated platelet, activated monocytes	CD40L, T-BAM, gp39, TNFSF5	MR1
CD160	costimulation	NK subset, T subset	BY55	CNX46-3
CD172a	adhesion	DC, stem, monocytes, granulocyte	SIRP alpha, Ptpns1	P84
CD178	apoptosis	activated T, tumor, testis, DC	Fas L, Fas Ligand	MFL3
CD180	B activation, LPS recognition	monocytes, DC, B subset	RP105, Ly-78	RP/14
CD184	embryogenesis, cell migration	B subset, T subset, DC, monocytes, endothelial	Fusin, CXCR4	2B11
CD197	T adhesion, cell migration	T subset, B subset, DC	CCR7, Cmkbr7	4B12
CD202b	angiogenesis, hematopoiesis	stem cells, endothelial	Tie2, Tek	TEK4
CD252	T costimulation, T-B interaction	activated B, mast, DC	OX40L, OX-40 Ligand	RM134L
CD253	apoptosis	activated NK, activated T, liver NK	TRAIL, APO2L, TNFSF10	N2B2
CD254	osteoclast differentiation, T-B and T-DC interaction	activated T, osteoblasts	TRANCE, RANKL, TNFSF11	K22/5
CD262	apoptosis	leukocytes, placenta, liver, tumor	TRAIL-R2, DR5, TNFRSF10b	MD5-1
CD273	costimulation, inhibition of T proliferation	activated monocytes, DC	B7DC, PD-L2, PDCD1L2	TY25
CD274	costimulation, cytokine production	leukocytes	B7-H1, PD-L1, PDCD1LG1	10F.9G2
CD275	lymphocyte costimulation	activated monocytes, DC, macrophages	B7H2, ICOSL, B7RP1, B7h	HK5.3
CD276	negative regulator of T cell activation	activated monocytes, DC, activated B, activated B, activated NK	B7-H3, B7RP-2	M3.2D7
CD278	T costimulation, cytokine production	activated T, Th2	ICOS, Ly-115	7E.17G9, C398.4A
CD279	negatively regulates lympho-cytes, T cell development	activated B, activated T	PD1, PD-1, Programmed Death-1	J43.1, RMP1-14
CD282	immune response to bacterial lipoproteins	monocytes, granulocytes, mac-rophages, DC, keratinocytes	TLR2	T2.5, mT2.7
CD284	innate immunity	monocytes, macrophages, endothelial	TLR4, Ly87	UT41
CD305	inhibits inflammation and cellular activity	B, T, NK, DC, monocytes, macrophages	LAIR1	113
CD309	adhesion, angiogenesis	primitive stem, tumor	VEGFR2, KDR, Flk-1	Avas12a1
CD314	cytolysis , cytokine production, costimulation	NK, CD8+ T	NKG2D	A10, C7, CX5, MI6
CD335	NK activation	NK	NKp46, NCR1	29A1.4
CD339	hematopoiesis, cadiovascular development	Schwann cells, keratinocytes, DC, T subset, BM stromal	Jagged-1, Serrate-1	HMJ1-29
CD357	supresses Treg function	activated T, Treg	TNFRSF18, GITR, AITR	DTA-1

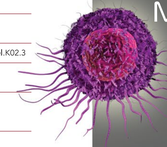
Human

Antigen	Function	Distribution	Alternative Names	Available Clone
CD1a	lipid antigen presentation	cortical thymocytes, Langerhans cells, DC	T6	HI149
CD2	T activation, adhesion	thymocytes, T, NK, B subset	T11, LFA-2	RPA-2.10
CD3	signaling T activation	Thymocyte subset, mature T	T3	Hlt3a, OKT3, UCHT1
CD4	HIV receptor, T activation, thymic differentiation	Macrophage, Monocyte, Thymocyte subset, Treg	L3T4, T4	OKT4, RPA-T4
CD5	T activation, T-B interaction	thymocytes, T, B subset, B-CLL	T1, Tp67	UCHT2
CD8a	MHC class I coreceptor, T cell differentiation / activation	thymocyte subset, T subset, NK, DC subset	T8, CD8, Leu-2, Ly-2	Hlt8a, OKT8, RPA-T8
CD10	B cell development, peptidase	B precursors, T precursors, neutrophils, fibroblasts	CALLA, NEP, gp100	CB-CALLA, HI10a
CD11a	T costimulation, adhesion	B, T, Macrophage, Monocyte, NK, granulocyte, DC	LFA-1, integrin alphaL	HI111
CD11b	adhesion, apoptosis	DC, Macrophage, Monocyte, NK, T subset, B subset	Mac-1, integrin alphaM	M1/70, ICRF44
CD11c	Adhesion	DC, Macrophage, Monocyte, NK, T subset, B subset	p150, 95, CR4, integrin alphaX	3.9
CD13	adhesion, aminopeptidase N, coronavirus receptor	placenta, DC, granulocyte, monocytes, fibroblasts	APN, gp150	WM15
CD14	LPS/LBP receptor	Granulocyte, Macrophage, Monocyte, Langerhans	LPS-R	61D3
CD15	adhesion	neutrophils, eosinophils, granulocyte	Lewis-x, Lex, SSEA-1, 3-FAL	HI98
CD16	mediates phagocytosis, Fcgamma low affinity receptor	NK, mast, macrophage, neutrophils, DC	CD16a	CB16
CD19	B activation and differentiation, BCR coreceptor,	B (not plasma), mast, FDC	B4	HIB19
CD24	proliferation and differentiation	thymocytes, erythrocytes, peripheral lymph, myeloid	BA-1	ML5, SN3
CD25	IL-2Ralpha, with IL-2Rbeta and gamma to form high affinity complex	Macrophage, Monocyte, activated T, B, T reg, DC subset	Tac, p55	BC96
CD27	T costimulation	T, B subset, NK subset, medullary thymocytes	T14, S152, TNFRSF7	O323, LG.7F9, LG.3A10
CD28	T costimulation	T, thymocytes, NK, plasma	Tp44, T44	CD28.2
CD29	adhesion, embryonic development	leukocytes, fibroblasts, DC, platelets, endothelial,	Integrin beta1	TS2/16
CD31	adhesion	platelets, granulocyte, endothelial, lymphocyte subset	PECAM-1, endocam	WM59
CD32	B development and activation, phagocytosis	monocytes, granulocytes, B, platelets	FcgammaRII	6C4
CD33	adhesion	myeloid progenitors, monocytes, granulocytes, DC, mast cells, activated T	p67, Siglec-3	WM53
CD34	stem cell marker, adhesion	hematopoietic precursors, capillary endothelial, embryonic fibroblasts	gp105-120, Mucosialin	4H11
CD38	cell activation and proliferation, adhesion	variable levels on majority of hematopoietic cells, high expression on plasma cells, B and activated T	T10, ADP-ribosyl cyclase	HIT2
CD40	B costimulation and survival, isotype-switching, T-B interaction	B, Macrophage, Monocyte, T subset, DC, endothelial, fibroblasts, keratinocytes	Bp50, TNFRSF5	SC3
CD41a	platelet activation and aggregation	platelets	gpIIb	HIP8
CD44	leukocyte adhesion and homing, T activation, tumor metastasis	hematopoietic and non-hematopoietic cells, except platelets, hepatocytes, testis	H-CAM, Pgp-1	IM7
CD45	activation, cell signaling	hematopoietic and non-hematopoietic cells, except platelets, erythrocytes	LCA, T200, B220	HI30
CD45R	activation, cell signaling	B cell lineage, activated T, LAK	Ly-5, Lyt-4, T200	RA3-6B2
CD45RA	activation, cell signaling	B, T subset(naive), monocytes		HI100
CD45RO	activation, cell signaling	activated T, memory T, B subset, monocytes, macrophages, granulocytes	UCHL-1	UCHL1
CD48	adhesion	leukocytes	Blast-1, BCM1	156-4H9
CD51/CD61	adhesion, signal trasduction	platelets, activated T, endothelial, osteoblasts, melanoma cells	vitronectin R	23C6
CD54	adhesion	endothelial, leukocytes	ICAM-1	15.2
CD56	adhesion	NK, T subset, neurons, some large granular lymphocyte leukemias, myeloid leukemias	NCAM	MEM-188, CMSSB

Antigen	Function	Distribution	Alternative Names	Available Clone
CD57	adhesion	NK subset, T subset, NKT	HNK-1, Leu-7	TB01
CD59	blocks assembly of membrane attack complex,	hematopoietic, non-hematopoietic cells	Protectin, H19, 1F-5Ag	OV9A2
CD62L	leukocytes homing and rolling	B subset, T subset, monocytes, granulocytes, NK, thymocytes	L-selectin, LECAM-1	DREG56
CD62P	leukocytes homing and rolling	activated platelets, endothelial	P-selectin, PADGEM	AK-4, Psel.K02.3
CD64	high affinity receptor for IgG, phagocytosis and ADCC	monocytes, macrophages, DC, activated granulocytes	FcgammaRI	10.1
CD69	activation, signaling, costimulation	acivated leukocytes, thymocytes, platelets, Langerhans cells	AIM	FN50
CD73	nucleoside uptake, T costimulation, lymph adhesion	B subset, T subset, FDC, epithelial	Ecto-5'-nucleotidase	AD2
CD80	costimulation, B-T interaction	activated B, activated T, macrophages, DC	B7, B7-1, BB1	2D10.4
CD83	costimulation	activated B, activated T, DC, Langerhans cells	HB15	HB15e
CD85j	activates NK cytotoxicity	monocytes, DC, T subset	LIR-6, LILRA1	HP-F1
CD86	costimulation of T	activated B, activated T, monocytes, DC	B70, B7-2	IT2.2
CD90	hematopoietic stem cell and neuron differentiation	CD34+ hematopoietic subset, neuron, fibroblasts, stromal	Thy-1	5E10
CD95	apoptosis	lymphocytes (high upon activation), monocytes, neutrophils, fibroblasts	Apo-1, Fas	EOS9.1
CD105	cellular response to TGF-beta1, adhesion, angiogenesis	endothelial, bone marrow subset, activated macrophages	Endoglin	SN6
CD106	leukocyte adhesion, migration, costimulation	activated endothelial, FDC, stromal	VCAM-1	STA
CD117	hematopoietic progenitor development and differentiation	hematopoietic progenitors, mast, melanocytes, hepatocytes	c-kit, SCFR	YB5.B8
CD123	forms IL-3Ralpha chain	lymph subset, basophils, hematopoietic progenitors, macrophages, DC, megakaryocytes	IL-3R, IL-3Ralpha	6H6
CD127	B and T cell development	T, B precursors	IL-7R	R34-34, RDR5
CD138	adhesion, cell morphology	plasma cells, pre-B, basolateral surface of epithelial	Syndecan-1	DL-101
CD144	adhesion, cell-cell interaction	endoth	VE-Cadherin, Cadherin-5	16B1
CD152	negative T stimulation	activated T, activated B	CTLA-4	BNI3
CD154	costimulation	activated T, activated platelets	CD40L, gp39, TRAP	24-31
CD161	NK cell-mediated cytotoxicity	T subset, NK, NKT	NKR-P1A	HP-3G10
CD178	apoptosis	activated T, tumor, testis	FasL, CD95L	NOK-1
CD180	B activation, LPS recognition	monocytes, DC, B subset	RP-105	MHR73-11
CD184	cell migration, HIV-1 entry	B subset, DC, T subset, monocytes, endothelial	CXCR4, fusin	12G5
CD193	chemotaxis, HIV-1 entry	eosinophils, T subset, DC	CCR3, CKR3	5E8-G9-B4, 5E8
CD197	T adhesion, cell migration	T subset, DC Subset, B subset	CCR7	3D12
CD243	ion pump	stem, tumor	MDR-1, p170, P-gp	UIC2
CD253	apoptosis	activated T, NK, B	TRAIL, Apo-2L, TL2, TNFSF10	RIK-2
CD272	inhibitory response	T, B, macrophages, DC	BTLA	MIH26
CD278	T costimulation	activated T, Th2	ICOS, AILIM	ISA-3
CD279	autoimmune disease and peripheral tolerance	activated B, activated T	PD1, SLEB2	MIH4, J116
CD281	regulates TLR2 function, innate immunity	monocytes, macrophages, DC, keratinocytes	TLR1	GD2.F4
CD282	response to bacterial lipoproteins, innate immunity	monocytes, neutrophils, macrophages	TLR2	TL2.1, T2.5
CD283	innate immunity	DC, fibroblasts	TLR3	TLR3.7
CD284	innate immunity, binds LPS	monocytes, macrophages, DC, endothelial	TLR4	HTA125
CD289	innate immunity, DC maturation	pDC, B, monocytes	TLR9	72-1665
CD300e	cell signaling	monocytes, myeloid DC	CMRF35L	UP-H2
CD338	absorption and excretion of certain xenobiotics	stem subset, melanoma, placenta	ABCG2, BCRP, Bcrp1, MXR	5D3
CD357	suppress Treg function	activated T, Treg	TNFRSF18, GITR, AITR	621

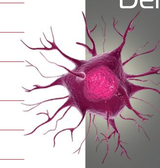
Macrophage/ Monocyte

CD11a CD33
CD11b (Mac-1) CD64
CD11c CD80
CD13 CD86
CD14 CD105
CD16 F4/80 (Ly71)



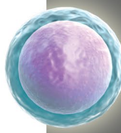
Dendritic Cell

CD1a CD80
CD1b CD123
CD1c CD207
CD11b CD209
CD11c CD273
CD14 HLA-DR
CD33



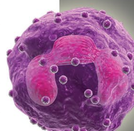
Stem Cell,

CD31 CD117
CD34 CD309
CD56 OCT3/4
CD59 (Protectin) Sca-1
CD90



Granulocyte

CD11b CD31
CD11c CD33
CD13 CD64
CD14 Ly-6G (Gr-1)
CD15
CD16



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