

Mouse anti-Human CD38 Antibody | anti-CD38 antibody

Anti-Hu CD38 FITC

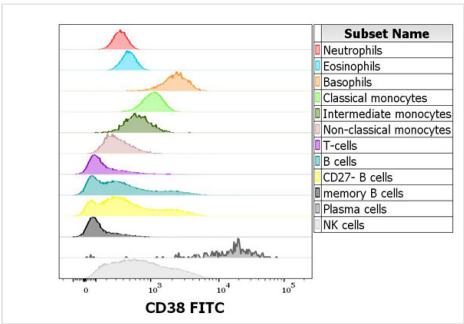
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA129351	Mouse	Human	Flow Cytometry, Functional Assay, Immunocytochemistry, Western Blot

PRODUCT SYNONYMS

CD38; Anti-Hu CD38 FITC; CD38 molecule; ADPRC1; cADPr hydrolase 1; T10; NAD(+) nucleosidase; ADP-ribosyl cyclase 1; anti-CD38 antibody

PRODUCT SPECIFICATIONS

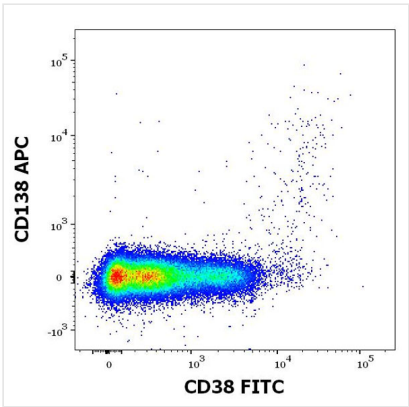
Host	Mouse
Reactivity	Human
Isotype	Mouse IgG1 kappa
Clone Number	HB7
Specificity	The mouse monoclonal antibody HB7 (HB-7) recognizes an extracellular epitope within amino acids 273-285 of human CD38, a 45 kDa type II transmembrane glycoprotein strongly expressed mainly on plasma cells and activated T and B lymphocytes; it is an antigenic marker of lymphoid cells. Its binding is blocked by daratumumab.
Purity/Purification	Purified antibody is conjugated with fluorescein isothiocyanate (FITC) under optimum conditions and unconjugated antibody and free fluorochrome are removed by size-exclusion chromatography.
Form/Format	Stabilizing phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide
Applicable Applications for anti-CD38 antibody	FCM/FACS (Flow Cytometry), ICC (Immunocytochemistry), WB (Western Blot)
Immunogen	BJAB cell line
Conjugation	FITC
Preparation and Storage	Store at 2-8 degree C. Protect from prolonged exposure to light. Do not freeze.



FCM/FACS (Flow Cytometry)

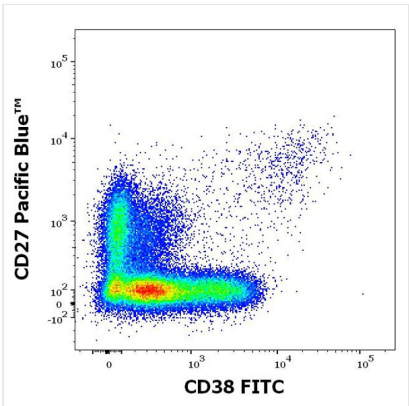
Reactivity of Anti-human CD38 FITC antibody (clone HB7) on human peripheral leukocytes

Analysis of the antibody staining profile was performed on blood leukocytes isolated from buffy coats. Suspension of blood leukocytes (2 x 10⁶ cells) was added to the mixture of CD38 FITC antibody (clone HB7, 0.5 ug/ml in stained blood sample), backbone antibody conjugates and Monocyte Blocking Buffer (#ED7747), vortexed and incubated for 20 min. Stained sample was fixed with 2 ml of 10x diluted EXCELLYSE Easy solution (#ED7066) for 10 min. Finally, samples were centrifuged (670 g, 5 min.), supernatant removed and the cell pellet was resuspended in 200 ul of PBS for acquisition.



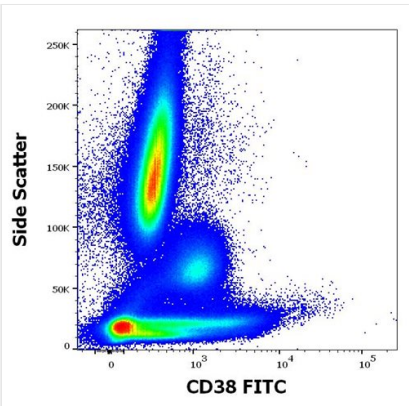
FCM/FACS (Flow Cytometry)

Staining pattern of Anti-human CD38 FITC antibody (clone HB7) in dot-plot fluorescence visualization (B cell gate) Analysis of the antibody staining profile was performed on blood leukocytes isolated from buffy coats. Mouse monoclonal anti-human CD38 FITC antibody (clone HB7) in concentration 0.5 ug/ml in stained stained blood sample (2 x 10⁶ cells) and Mouse monoclonal anti-human CD138 APC antibody (clone MI15) in concentration 2 ug/ml, respectively.



FCM/FACS (Flow Cytometry)

Staining pattern of Anti-human CD38 FITC antibody (clone HB7) in dot-plot fluorescence visualization (B cell gate) Analysis of the antibody staining profile was performed on blood leukocytes isolated from buffy coats. Mouse monoclonal anti-human CD38 FITC antibody (clone HB7) in concentration 0.5 ug/ml in stained stained blood sample (2 x 10⁶ cells) and Mouse monoclonal anti-human CD27 Pacific Blue antibody (clone LT27) was used in concentration 2 ug/ml, respectively.



FCM/FACS (Flow Cytometry)

Anti-human CD38 FITC antibody (clone HB7) works in flow cytometry application. Analysis of the antibody staining profile was performed on blood leukocytes isolated from buffy coats. Mouse monoclonal anti-human CD38 FITC antibody (clone HB7) was used in concentration 0.5 ug/ml in stained blood sample (2 x 10⁶ cells).

ADDITIONAL INFORMATION

Related Product Information for anti-CD38 antibody

CD38 (NAD⁺ glycohydrolase) is a type II transmembrane glycoprotein able to induce activation, proliferation and differentiation of mature lymphocytes and mediate apoptosis of myeloid and lymphoid progenitor cells. Another role of CD38 is provided by enzymatic activity of its extracellular part. CD38 acts as NAD⁺ glycohydrolase converting NAD⁺ into ADP-ribose, as ADP-ribosyl cyclase producing cADPR and as cADPR hydrolase, thus affecting levels of calcium-mobilizing metabolites. ADPR produced by CD38 serves as an important second messenger of neutrophil and dendritic cell migration. CD38 belongs to markers of B cell subsets, leukemia, and a target of immunotherapy in myeloma treatment.

References	*Cakir-Kiefer C, Muller-Steffner H, Oppenheimer N, Schubert F: Kinetic competence of the cADP-ribose-CD38 complex as an intermediate in the CD38/NAD+ glycohydrolase-catalysed reactions: implication for CD38 signalling. <i>Biochem J</i>. 2001 Sep 1;358(Pt 2):399-406., URL: https://www.ncbi.nlm.nih.gov/pubmed/11513738?ordin,*Lund FE, Muller-Steffner H, Romero-Ramirez H, Moreno-García ME, Partida-Sánchez S, Makris M, Oppenheimer NJ, Santos-Argumedo L, Schubert F: CD38 induces apoptosis of a murine pro-B leukemic cell line by a tyrosine kinase-dependent but ADP-ribosyl cyclase- and NAD glycohydrolase-independent mechanism. <i>Int Immunol</i>. 2006 Jul;18(7):1029-42., URL: https://www.ncbi.nlm.nih.gov/pubmed/16720618?ordin,*Partida-Sanchez S, Gasser A, Fliegert R, Siebrands CC, Dammermann W, Shi G, Mousseau BJ, Sumoza-Toledo A, Bhagat H, Walseth TF, Guse AH, Lund FE. Chemotaxis of mouse bone marrow neutrophils and dendritic cells is controlled by adp-ribose, the major product generated by the CD38 enzyme reaction. <i>J Immunol</i>. 2007 Dec 1;179(11):7827-39., URL: https://www.ncbi.nlm.nih.gov/pubmed/18025229?ordin, *Goldmacher VS, Bourret LA, Levine BA, Rasmussen RA, Pourshadi M, Lambert JM, Anderson KC: Anti-CD38-blocked ricin: an immunotoxin for the treatment of multiple myeloma. <i>Blood</i> 1994 Nov 1;84(9):3017-25., URL: https://pubmed.ncbi.nlm.nih.gov/7524764/,*Zhao YJ, Zhu WJ, Wang XW, Zhang LH, Lee HC: Determinants of the membrane orientation of a calcium signaling enzyme CD38. <i>Biochim Biophys Acta</i> 2015 Sep;1853(9):2095-103., URL: https://pubmed.ncbi.nlm.nih.gov/25447548/,*Berthelie V, Laboureau J, Boulla G, Schubert F, Deterre P: Probing ligand-induced conformational changes of human CD38. <i>Eur J Biochem</i>. 2000 May;267(10):3056-64., URL: https://pubmed.ncbi.nlm.nih.gov/10806406/,*Li T, Qi S, Unger M, Hou YN, Deng QW, Liu J, Lam CM, Wang XW, Xin D, Zhang P, Koch-Nolte F, Hao Q, Zhang H, Lee HC, Zhao YJ: Immuno-targeting the multifunctional CD38 using nanobody. <i>Sci Rep</i>. 2016 Jun 2;6:27055. , URL: https://pubmed.ncbi.nlm.nih.gov/27251573/,*Ghose J, Viola D, Terrazas C, Caserta E, Troadec E, Khalife J, Gunes EG, Sanchez J, McDonald T, Marcucci G, Kaur B, Rosenzweig M, Keats J, Rosen S, Krishnan A, Satoskar AR, Hofmeister CC, Pichiorri F: Daratumumab induces CD38 internalization and impairs myeloma cell adhesion. <i>Oncoimmunology</i>. 2018 Jul 23;7(10):e1486948., URL: https://pubmed.ncbi.nlm.nih.gov/30288349/,*Ferrero E, Orciani M, Vacca P, Ortolan E, Crovella S, Titti F, Saccucci F, Malavasi F: Characterization and phylogenetic epitope mapping of CD38 ADPR cyclase in the cynomolgus macaque. <i>BMC Immunol</i>. 2004 Sep 21;5:21., URL: https://pubmed.ncbi.nlm.nih.gov/15383153/,*Ratuszny D, Skripuletz T, Wegner F, Groß M, Falk C, Jacobs R, Ruschulte H, Stangel M, Suhs KW: Case report: Daratumumab in a patient with severe refractory anti-NMDA receptor encephalitis. <i>Front Neurol</i>. 2020 Dec 22;11:602102., URL: https://pubmed.ncbi.nlm.nih.gov/33414761/,*Verhoeven D, Grinwis L, Marsman C, Jansen MH, van Leeuwen E, Kuijpers TW: B-cell targeting with anti-CD38 daratumumab: implications for differentiation and memory responses. <i>Life Sci Alliance</i> 2023 Jul 7;6(9):e202302214., URL: https://pubmed.ncbi.nlm.nih.gov/37419630/,*Shrestha P, Astter Y, Davis DA, Zhou T, Yuan CM, Ramaswami R, Wang HW, Lurain K, Yarchoan R: Daratumumab induces cell-mediated cytotoxicity of primary effusion lymphoma and is active against refractory disease. <i>Oncoimmunology</i> 2023 Jan 7;12(1):2163784., URL: https://pubmed.ncbi.nlm.nih.gov/36632565/,
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NCBI AND UNIPROT INFORMATION

NCBI GI #	55977782
NCBI GeneID	952
UniProt Accession #	P28907; O00121; O00122; Q96HY4
Molecular Weight	300
NCBI Official Full Name	ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase 1
NCBI Official Synonym Full Names	CD38 molecule
NCBI Official Symbol	CD38
NCBI Official Synonym Symbols	T10; ADPRC 1
NCBI Protein Information	ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase 1; cADPr hydrolase 1; CD38 antigen (p45); NAD(+) nucleosidase; ADP-ribosyl cyclase 1; 2'-phospho-ADP-ribosyl cyclase; 2'-phospho-cyclic-ADP-ribose transferase; 2'-phospho-ADP-ribosyl cyclase/2'-phospho-cycli
UniProt Protein Name	ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase 1
UniProt Gene Name	CD38
UniProt Synonym Gene Names	ADPRC 1; cADPr hydrolase 1
UniProt Entry Name	CD38_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/mouse-human-antibody/cd38/129351>