

SM3083F

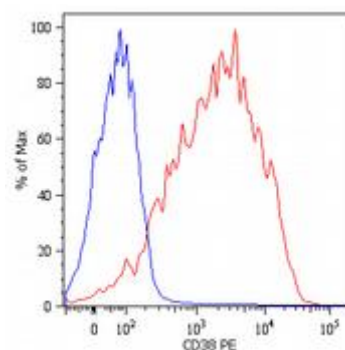
Monoclonal Antibody to CD38 - FITC

Alternate names:	ADP-ribosyl cyclase 1, Cyclic ADP-ribose hydrolase 1, T10, cADPr hydrolase 1
Quantity:	100 Tests
Background:	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.
Uniprot ID:	P28907
NCBI:	NP_001766.2
GeneID:	952
Host / Isotype:	Mouse / IgG1
Recommended Isotype Controls:	SM10F (for use in human samples)
Clone:	HIT2
Immunogen:	Human thymocytes in foetus
Format:	State: Liquid Ig fraction Buffer System: Phosphate buffered saline (PBS) solution containing 15mM sodium azide Label: FITC – Conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC and adjusted for direct use.
Applications:	Flow Cytometry analysis of human blood cells using 20 µl reagent / 100 µl of whole blood or 10 ⁶ cells in a suspension. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody reacts with CD38 (T10), 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.
Species Reactivity:	Tested: Human
Storage:	Store the antibody at 2 - 8 °C. DO NOT FREEZE! This product is photosensitive and should be protected from light. Shelf life: one year from despatch.
General Readings:	1. 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. PubMed PMID: 11513738.

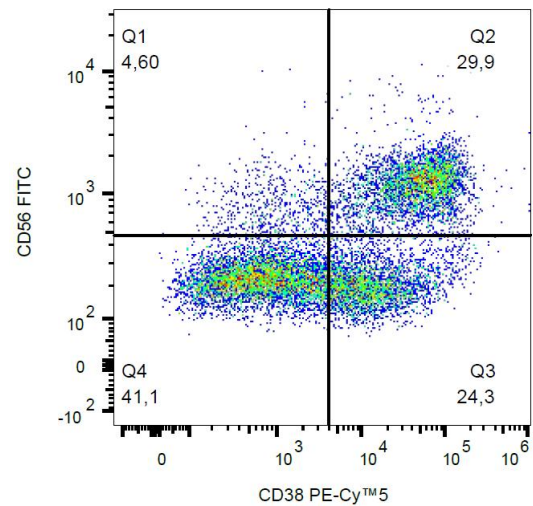
2. Lund FE, Muller-Steffner H, Romero-Ramirez H, Moreno-García ME, Partida-Sánchez S, Makris M, et al. CD38 induces apoptosis of a murine pro-B leukemic cell line by a tyrosine kinase-dependent but ADP-ribosyl cyclase- and NAD glycohydrolase-independent mechanism. *Int Immunol*. 2006 Jul;18(7):1029-42. Epub 2006 May 23. PubMed PMID: 16720618.
3. Partida-Sanchez S, Gasser A, Fliegert R, Siebrands CC, Dammermann W, Shi G, et al. Chemotaxis of mouse bone marrow neutrophils and dendritic cells is controlled by adp-ribose, the major product generated by the CD38 enzyme reaction. *J Immunol*. 2007 Dec 1;179(11):7827-39. PubMed PMID: 18025229.
4. Leukocyte Typing III., McMichael A.J. et al (Eds.), Oxford University Press (1987).
5. Rozková D, Novotná L, Pytlík R, Hochová I, Kozák T, Bartůňková J, et al. Toll-like receptors on B-CLL cells: expression and functional consequences of their stimulation. *Int J Cancer*. 2010 Mar 1;126(5):1132-43. doi: 10.1002/ijc.24832. PubMed PMID: 19685493.
6. Kolar GR, Mehta D, Pelayo R, Capra JD. A novel human B cell subpopulation representing the initial germinal center population to express AID. *Blood*. 2007 Mar 15;109(6):2545-52. Epub 2006 Nov 28. PubMed PMID: 17132718.
7. Všíanská P, Říhová L, Varmužová T, Suská R, Kryukov F, Mikulášová A, et al. Analysis of B-cell subpopulations in monoclonal gammopathies. *Clin Lymphoma Myeloma Leuk*. 2015 Apr;15(4):e61-71. doi: 10.1016/j.clml.2014.12.003. Epub 2014 Dec 12. PubMed PMID: 25578543.

Pictures:

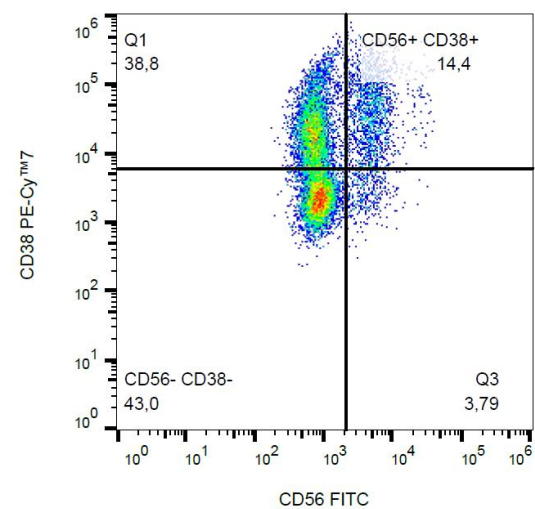
Surface staining of PHA stimulated human peripheral blood lymphocytes with anti-human CD38 (HIT2) PE.



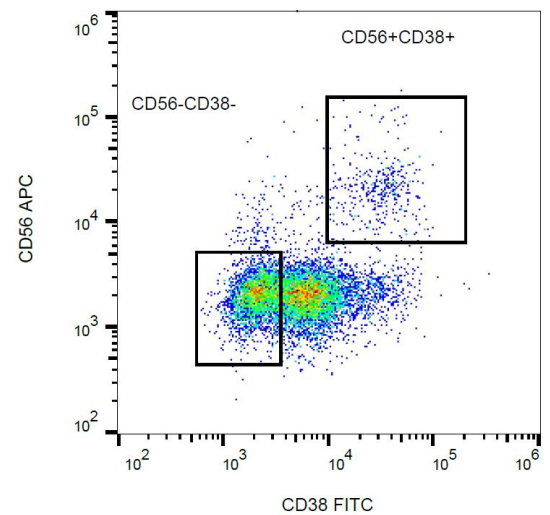
Surface staining of human peripheral blood with anti-human CD38 (HIT2) PE-CyTM5.



Surface staining of human peripheral blood with anti-human CD38 (HIT2) PE-CyTM7.



Surface staining of human peripheral blood with anti-human CD38 (HIT2) FITC.



Surface staining of human peripheral blood with anti-human CD38 (HIT2) Alexa Fluor® 700.

