

TECHNICAL DATA SHEET

CyFlow™ CD38 Purified Anti-Hu; Clone HIT2

REF CQ743527

For Research Use Only.
Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD38
Alternative Names	T10
Clone	HIT2
Clonality	monoclonal
Format	Purified
Host / Isotype	Mouse / IgG1
Species Reactivity	Human
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [1 mg/ml]
Immunogen	Human thymocytes in foetus

Specificity

The mouse monoclonal antibody HIT2 recognizes CD38 antigen, 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.

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Application

Based on published sources, this antibody is suitable for the following applications:

- Flow cytometry
- Western blot
- Immunohistochemistry

Storage Buffer

The reagent is provided in phosphate buffered saline (PBS) solution, pH $\approx$ 7.4, containing 0.1% (w/v) sodium azide.

Storage and Stability

Storage	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
Stability	Do not use after expiration date stamped on vial label.

Background Information

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.

References

- McMichael AJ, Beverley PCL, Cebbold S, et al. (Eds): Leucocyte Typing III, White Cell Differentiation Antigens. Oxford University Press, Oxford. 1987; 1-1050. < NLM ID: 8913266 >
- 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. Biochem J. 2001 Sep 1; 358(2):399-406. < PMID: 11513738 >
- 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

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- cell line by a tyrosine kinase-dependent but ADP-ribosyl cyclase- and NAD glycohydrolase-independent mechanism. *Int Immunol.* 2006 Jul; 18(7):1029-42. < PMID: 16720618 >
- 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 enzymereaction. *J Immunol.* 2007 Dec 1; 179(11):7827-39. < PMID: 18025229 >
 - 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. < PMID: 17132718 >
 - Rozková D, Novotná L, Pytlík R, Hochová I, Kozák T, Bartůnková J, Spísek R: Toll-like receptors on B-CLL cells: expression and functional consequences of their stimulation. *Int J Cancer.* 2010 Mar 1; 126(5):1132-43. < PMID: 19685493 >

The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

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