anti-human CD38

Monoclonal Antibody HIT2 to CD38 (Human)

Cat-No: **21270381** 100 µg in 100 µl

Clone: HIT2

Specificity: The antibody HIT2 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. **HLDA III; WS Code T 155**

Isotype subclass: Mouse IgG1

Form: Purified from ascites by protein-G affinity chromatography.

Purity: > 95% (by SDS-PAGE)

Physical state: Liquid

Buffer/Additives/Preservative:PBS containing 0.09 % sodium azide (pH 7.2).

Expiration date: The reagent is stable until the expiry date stated on the vial label.

Storage conditions: Store at 4°C. For long-term storage aliquot and store at -20°C. Avoid freeze/thaw cycles.

Application: Flow Cytometry, Immunohistochemistry (frozen sections), Western Blotting: non reducing conditions

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.

References:

*) Cakir-Kiefer C, et al.: 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(Pt 2):399-406.

*) Lund FE, 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.

*) Partida-Sanchez S, 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.

Warning: Sodium azide is harmful if swallowed (R22). Keep out of reach of children (S2). Keep away from food, drink and animal feeding stuff (S13). Wear suitable protective clothing (S36). If swallowed, seek medical advice immediately and show this container or label (S46). Contact with acids liberates very toxic gas (R32). Azide compounds should be flushed with large volumes of water during disposal to avoid deposits in lead or copper plumbing where explosive conditions can develop.

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