

anti-human CD38 PE/Dy747-conjugated

PE/Dy747-conjugated monoclonal antibody HIT2 to human CD38

Cat-No: **21270387.7**

500 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: The purified antibody is conjugated with tandem dye PE-Dyomics 747 (PE-DY747) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary

Physical state: Liquid

Buffer/Additives/Preservative: PBS containing 1 % BSA and 0.09 % sodium azide (pH 7.2).

Storage conditions: Store at 4 °C. Avoid prolonged exposure to light. The reagent is stable until the expiry date stated on the vial label.

Application: Flow Cytometry

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:

- *) Lund FE, Muller-Steffner H, Romero-Ramirez H, Moreno-García ME, Partida-Sánchez S, Makris M, Oppenheimer NJ, Santos-Argumedo L, Schuber 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. *Int Immunol.* 2006 Jul;18(7):1029-42.
- *) 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. *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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