

Store at
4°C

CD38 (HIT2) Mouse mAb (PerCP-Cy5.5® Conjugate)

#10284

Cell Signaling
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New 06/18

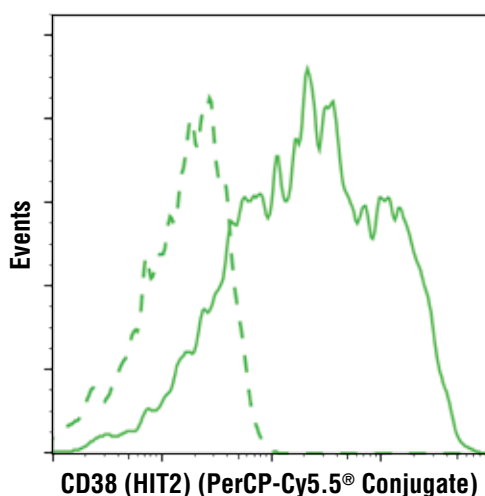
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F
EndogenousSpecies Cross-Reactivity
HIsotype
Mouse IgG1, κ

Description: This Cell Signaling Technology antibody is conjugated to PerCP-Cy5.5® and tested in-house for direct flow cytometric analysis in human cells.

Background: Cyclic ADP-ribose hydrolase 1 (CD38) is a transmembrane protein involved in several important biological processes, including immune response, insulin secretion, and social behavior. Originally described as a glycosylated immune cell surface marker, additional research determined that CD38 is a multifunctional enzyme that catalyzes the synthesis and hydrolysis of cyclic ADP ribose (cADPR) from NAD⁺ (1,2). Under acidic conditions, CD38 also catalyzes the synthesis of nicotinic acid adenine dinucleotide phosphate (NAADP) from NAD⁺. Both cADPR and NAADP act as calcium ion mobilizing messengers that target different intracellular Ca²⁺ stores (3-6). Since CD38 is the primary mammalian NAD⁺ glycohydrolase responsible for NAD⁺ metabolism, CD38 may be a valuable therapeutic target for treatment of metabolic diseases regulated by NAD⁺-dependent pathways (7,8). CD38 has also been considered a possible therapeutic target for antibody-mediated therapy for myeloma and chronic lymphocytic leukemia (9-11).

Specificity/Sensitivity: CD38 (HIT2) Mouse mAb (PerCP-Cy5.5® Conjugate) recognizes endogenous levels of total CD38 protein. This antibody detects epitopes within the extracellular domain.

Source/Purification: This monoclonal antibody was purified from tissue culture supernatant via affinity chromatography. The purified antibody was conjugated under optimal conditions, with unreacted dye removed from the preparation.



Flow cytometric analysis of live human peripheral blood mononuclear cells using CD38 (HIT2) Mouse mAb (PerCP-Cy5.5® Conjugate) (solid line) compared to concentration-matched Mouse (MOPC-21) mAb IgG1 Isotype Control (PerCP-Cy5.5® Conjugate) #24589 (dashed line).

Storage: Supplied in 10 mM NaH₂PO₄, 150 mM NaCl, 0.09% Na₂S₂O₃, 0.1% gelatin, pH 7.2. This product is stable for 6 months when stored at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Recommended Antibody Dilutions:

Flow Cytometry 1:20

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

Background References:

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- (5) Ogunbayo, O.A. et al. (2011) *J Biol Chem* 286, 9136-40.
- (6) Lee, H.C. (2012) *J Biol Chem* 287, 31633-40.
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- (8) Escande, C. et al. (2013) *Diabetes* 62, 1084-93.
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- (10) Deaglio, S. et al. (2010) *Semin Cancer Biol* 20, 416-23.
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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.