

Store at
4°C

CD38 (HIT2) Mouse mAb (FITC Conjugate)

#90005

Cell Signaling
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UniProt ID #P28907

New 05/18

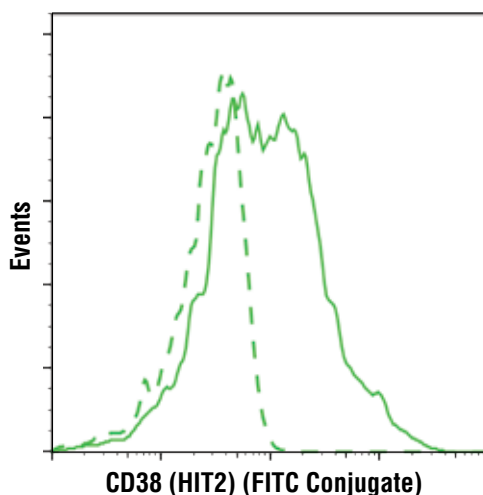
For Research Use Only. Not For Use In Diagnostic Procedures.**Applications**
F
Endogenous**Species Cross-Reactivity**
H**Isotype**
Mouse IgG1, κ

Description: This Cell Signaling Technology antibody is conjugated to FITC 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 NADP⁺. 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 (FITC Conjugate) recognizes endogenous levels of total CD38 protein. This antibody detects an epitope 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 (FITC Conjugate) (solid line) compared to concentration-matched Mouse (MOPC-21) mAb IgG1 Isotype Control (FITC Conjugate) #97146 (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:

- (1) Malavasi, F. et al. (2008) *Physiol Rev* 88, 841-86.
- (2) Jin, D. et al. (2007) *Nature* 446, 41-5.
- (3) Lee, H.C. et al. (1999) *Mol Cell Biochem* 193, 89-98.
- (4) Calcrafft, P.J. et al. (2009) *Nature* 459, 596-600.
- (5) Ogunbayo, O.A. et al. (2011) *J Biol Chem* 286, 9136-40.
- (6) Lee, H.C. (2012) *J Biol Chem* 287, 31633-40.
- (7) Cantó, C. et al. (2012) *Cell Metab* 15, 838-47.
- (8) Escande, C. et al. (2013) *Diabetes* 62, 1084-93.
- (9) Malavasi, F. et al. (2011) *Blood* 118, 3470-8.
- (10) Deaglio, S. et al. (2010) *Semin Cancer Biol* 20, 416-23.
- (11) Chillemi, A. et al. (2013) *Mol Med* 19, 99-108.

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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.