

#14637 Store at -20°C

CD38 Antibody



Cell Signaling
TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	45	Rabbit	#P28907	952

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

CD38 Antibody recognizes endogenous levels of total CD38 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asn229 of human CD38 protein. Antibodies are purified by protein A and peptide affinity chromatography.

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).

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. Calcraft, 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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.
All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.