

CD38 (H-170): sc-15362

BACKGROUND

CD38 is a type II integral membrane glycoprotein which is present on early B and T cell lineages and activated B and T cells but is absent from most mature resting peripheral lymphocytes. CD38 is also found on thymocytes, pre-B cells, germinal center B cells, mitogen-activated T cells, monocytes and Ig-secreting plasma cells. CD38 acts as a NAD glycohydrolase in T lymphocytes. On hematopoietic cells CD38 induces activation, proliferation, and differentiation of mature T and B cells and mediates apoptosis of myeloid and lymphoid progenitor cells. In addition to acting as a signaling receptor, CD38 is also an enzyme capable of producing several calcium-mobilizing metabolites, including cyclic adenosine diphosphate ribose (cADPR). CD38 also plays a role in maintaining survival of an invariant NK T (iNKT) cell subset that preferentially contributes to the maintenance of immunological tolerance.

CHROMOSOMAL LOCATION

Genetic locus: CD38 (human) mapping to 4p15.32; Cd38 (mouse) mapping to 5 B3.

SOURCE

CD38 (H-170) is a rabbit polyclonal antibody raised against a sequence of CD38 of origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

CD38 (H-170) is recommended for detection of CD38 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD38 siRNA (h): sc-29996, CD38 siRNA (m): sc-37246, CD38 shRNA Plasmid (h): sc-29996-SH, CD38 shRNA Plasmid (m): sc-37246-SH, CD38 shRNA (h) Lentiviral Particles: sc-29996-V and CD38 shRNA (m) Lentiviral Particles: sc-37246-V.

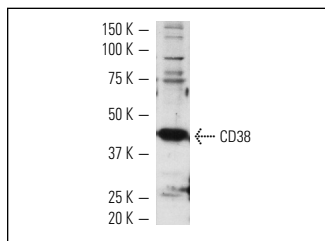
Molecular Weight of CD38: 45 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, CCRF-CEM cell lysate: sc-2225 or THP-1 cell lysate: sc-2238.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CD38 (H-170): sc-15362. Western blot analysis of CD38 expression in HuT-78 whole cell lysate.

SELECT PRODUCT CITATIONS

- Smyth, L.M., et al. 2006. Novel localization of CD38 in perivascular sympathetic nerve terminals. *Neuroscience* 139: 1467-1477.
- Zumaquero, E., et al. 2010. Exosomes from human lymphoblastoid B cells express enzymatically active CD38 that is associated with signaling complexes containing CD81, Hsc-70 and Lyn. *Exp. Cell Res.* 316: 2692-2706.
- Hayashida, S., et al. 2010. Fasting promotes the expression of SIRT1, an NAD⁺-dependent protein deacetylase, via activation of PPAR α in mice. *Mol. Cell. Biochem.* 339: 285-292.
- Buggins, A.G., et al. 2011. Evidence for a macromolecular complex in poor prognosis CLL that contains CD38, CD49d, CD44 and MMP-9. *Br. J. Haematol.* 154: 216-222.
- Durnin, L., et al. 2012. Adenosine 5-diphosphate-ribose is a neural regulator in primate and murine large intestine along with β -NAD⁺. *J. Physiol.* 590: 1921-1941.
- Pavón, E.J., et al. 2013. Increased CD38 expression in T cells and circulating anti-CD38 IgG autoantibodies differentially correlate with distinct cytokine profiles and disease activity in systemic lupus erythematosus patients. *Cytokine* 62: 232-243.

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