

CD38 (M-19): sc-7049

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 (mouse) mapping to 5 B3.

SOURCE

CD38 (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD38 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-7049 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CD38 (M-19) is recommended for detection of CD38 of 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 (m): sc-37246, CD38 siRNA (r): sc-270394, CD38 shRNA Plasmid (m): sc-37246-SH, CD38 shRNA Plasmid (r): sc-270394-SH, CD38 shRNA (m) Lentiviral Particles: sc-37246-V and CD38 shRNA (r) Lentiviral Particles: sc-270394-V.

Molecular Weight of CD38: 45 kDa.

Positive Controls: mouse spleen extract: sc-2391 or rat PBL whole cell lysate.

STORAGE

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

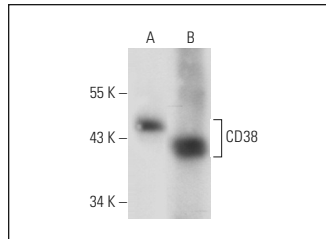
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

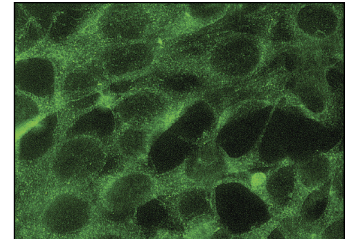
RESEARCH USE

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

DATA



CD38 (M-19): sc-7049. Western blot analysis of CD38 expression in rat PBL whole cell lysate (A) and mouse spleen tissue extract (B).



CD38 (M-19): sc-7049. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Khoo, K.M., et al. 2000. Localization of plasma membrane CD38 is domain specific in rat hepatocyte. *Arch. Biochem. Biophys.* 373: 35-43.
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4. Umesh, A., et al. 2006. Integrin ligands mobilize Ca²⁺ from ryanodine receptor-gated stores and lysosome-related acidic organelles in pulmonary arterial smooth muscle cells. *J. Biol. Chem.* 281: 34312-34323.
5. Smyth, L.M., et al. 2006. Novel localization of CD38 in perivascular sympathetic nerve terminals. *Neuroscience* 139: 1467-1477.
6. Aksoy, P., et al. 2006. Regulation of SIRT 1 mediated NAD dependent deacetylation: a novel role for the multifunctional enzyme CD38. *Biochem. Biophys. Res. Commun.* 349: 353-359.
7. Soares, S., et al. 2007. NAADP as a second messenger: neither CD38 nor base-exchange reaction are necessary for *in vivo* generation of NAADP in myometrial cells. *Am. J. Physiol., Cell Physiol.* 292: C227-C239.
8. Jin, D., et al. 2007. CD38 is critical for social behaviour by regulating oxytocin secretion. *Nature* 446: 41-45.
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