

CD38 (3H1268): sc-70655

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.

REFERENCES

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2. Harada, N., et al. 1993. Expression cloning of a cDNA encoding a novel murine B cell activation marker. Homology to human CD38. *J. Immunol.* 151: 3111-3118.
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4. Howard, M., et al. 1993. Formation and hydrolysis of cyclic ADP-ribose catalyzed by lymphocyte antigen CD38. *Science* 262: 1056-1059.
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6. Kirkham, P.A., et al. 1995. Murine B-cell activation via CD38 and protein tyrosine phosphorylation. *Immunology* 83: 513-516.
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8. Kumagai, M., et al. 1995. Ligation of CD38 suppresses human B lymphopoiesis. *J. Exp. Med.* 181: 1101-1110.
9. Dianzani, U. and Malavasi, F. 1996. Lymphocyte adhesion to endothelium. *Crit. Rev. Immunol.* 15: 167-200.

CHROMOSOMAL LOCATION

Genetic locus: Cd38 (mouse) mapping to 5 B3.

SOURCE

CD38 (3H1268) is a rat monoclonal antibody raised against partially purified CD38 from mouse bone marrow pre-B cells.

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD38 (3H1268) is recommended for detection of CD38 of mouse origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1×10^6 cells).

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

Molecular Weight of CD38: 45 kDa.

Positive Controls: mouse spleen extract: sc-2391.

SELECT PRODUCT CITATIONS

1. Vatner, D.E., et al. 2018. Enhanced longevity and metabolism by brown adipose tissue with disruption of the regulator of G protein signaling 14. *Aging Cell* 14: e12751.

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.

PROTOCOLS

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