

CD38 (AT1): sc-7325

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.

SOURCE

CD38 (AT1) is a mouse monoclonal antibody raised against human T cell line CCRF-CEM.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD38 (AT1) is available conjugated to agarose (sc-7325 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7325 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7325 PE), fluorescein (sc-7325 FITC), Alexa Fluor® 488 (sc-7325 AF488), Alexa Fluor® 594 (sc-7325 AF594) or Alexa Fluor® 647 (sc-7325 AF647), 200 µg/ml, for IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-7325 AF680) or Alexa Fluor® 790 (sc-7325 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, CD38 (AT1) is available conjugated to Alexa Fluor® 405 (sc-7325 AF405), 100 µg/2 ml, for IF, IHC(P) and FCM.

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APPLICATIONS

CD38 (AT1) is recommended for detection of CD38 of human 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

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

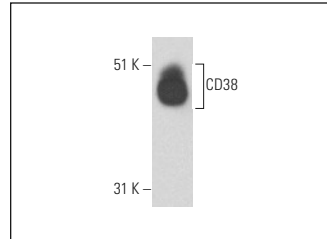
Molecular Weight of CD38: 45 kDa.

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

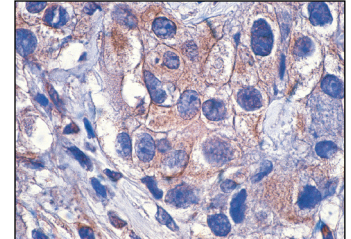
STORAGE

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

DATA



CD38 (AT1): sc-7325. Western blot analysis of CD38 expression in CCRF-CEM whole cell lysate under non-reducing conditions.



CD38 (AT1): sc-7325. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lymphoma showing membrane staining.

SELECT PRODUCT CITATIONS

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- 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.
- Dabertrand, F., et al. 2007. Role of RYR3 splice variants in calcium signaling in mouse nonpregnant and pregnant myometrium. *Am. J. Physiol., Cell Physiol.* 293: C848-C854.
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- Tonino, S.H., et al. 2008. No convincing evidence for a role of CD31-CD38 interactions in the pathogenesis of chronic lymphocytic leukemia. *Blood* 112: 840-843.
- Munesue, T., et al. 2010. Two genetic variants of CD38 in subjects with autism spectrum disorder and controls. *Neurosci. Res.* 67: 181-191.
- Schmid, F., et al. 2011. CD38: a NAADP degrading enzyme. *FEBS Lett.* 585: 3544-3548.
- Numata, T., et al. 2012. The ΔC splice-variant of TRPM2 is the hypertonicity-induced cation channel in HeLa cells, and the ecto-enzyme CD38 mediates its activation. *J. Physiol.* 590: 1121-1138.
- Chen, Q. and Ross, A.C. 2015. All-*trans*-retinoic acid and CD38 ligation differentially regulate CD1d expression and α-galactosylceramide-induced immune responses. *Immunobiology* 220: 32-41.

RESEARCH USE

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