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CD38 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1338a

Specification

CD38 Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	P28907
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**34kDa KDa**

Description
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 lym- phocytes. 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 metabo- lites, 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.

Immunogen
Purified recombinant fragment of human CD38 expressed in E. Coli.

Formulation
Ascitic fluid containing 0.03% sodium azide.

CD38 Antibody - Additional Information

Gene ID 952

Other Names
ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase 1, 3.2.2.6, 2'-phospho-ADP-ribosyl cyclase, 2'-phospho-ADP-ribosyl cyclase/2'-phospho-cyclic-ADP-ribose transferase, 2.4.99.20, 2'-phospho-cyclic-ADP-ribose transferase, ADP-ribosyl cyclase 1, ADPRC 1, Cyclic ADP-ribose hydrolase 1, cADPr hydrolase 1, T10, CD38, CD38

Dilution
WB~~1/500 - 1/2000
IHC~~1/200 - 1/1000
IF~~1:200~1000.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
CD38 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CD38 Antibody - Protein Information

Name CD38

Function
Synthesizes cyclic ADP-ribose (cADPR), a second messenger for glucose-induced insulin secretion (PubMed:7961800, PubMed:8253715). Synthesizes the Ca(2+) mobilizer nicotinate-adenine dinucleotide phosphate, NAADP(+), from 2'-phospho-cADPR and nicotinic acid, as well as from NADP(+) and nicotinic acid. At both pH 5.0 and pH 7.4 preferentially transforms 2'-phospho-cADPR into NAADP(+), while preferentially cleaving NADP(+) to cADPR and ADPRP rather than into NADDP(+) (PubMed:16690024). Has cADPR hydrolase activity (PubMed:7961800, PubMed:8253715).

Cellular Location
Cell surface. Membrane; Single-pass type II membrane protein

Tissue Location
Expressed at high levels in pancreas, liver, kidney, brain, testis, ovary, placenta, malignant lymphoma and neuroblastoma.

CD38 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CD38 Antibody - Images

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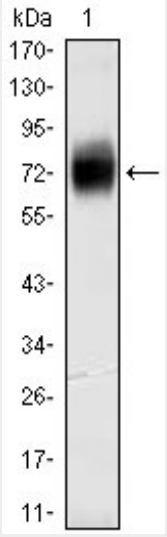

Figure 1: Western blot analysis using CD38 mouse mouse mAb against CD38-hIgGFc transfected HEK293 cell lysate.

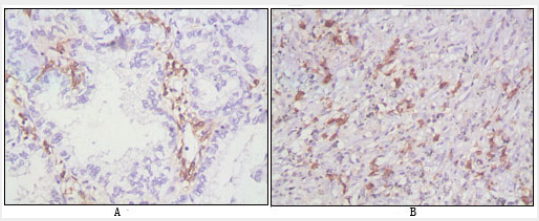

Figure 2: Immunohistochemical analysis of paraffin-embedded human lung cancer (A), lymphonodus tissue (B),showing cytomembrane localization using CD38 mouse mAb with DAB staining.

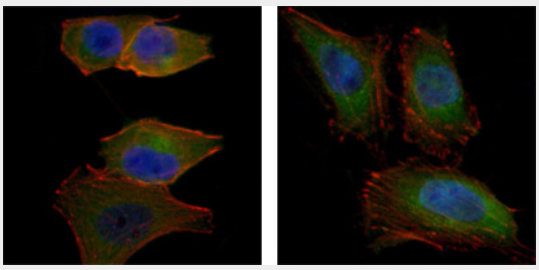

Figure 2: Immunofluorescence analysis of PANC-1 (left) and Hela (right) cells using AKT2 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

CD38 Antibody - References

1. Trends Biochem Sci. 1992 Dec;17(12):495. 2. J Cell Biol. 1999 Sep 6;146(5):1161-72. 3. Exp Hematol. 2002 Jun;30(6):582-9. 4. Mol Immunol. 2006 Mar;43(7):1029-39.