

CD38 Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO1338a

Product Information

Application	WB, IHC, E
Primary Accession	P28907
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	6E12D
Isotype	IgG1
Calculated MW	34328
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 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.
Immunogen	Purified recombinant fragment of human CD38 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

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 E~~N/A
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.

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.

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.

Images

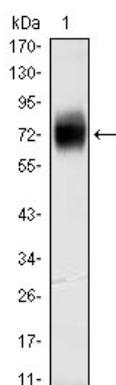


Figure 1: Western blot analysis using CD38 mouse mouse mAb against CD38-hIgGfC transfected HEK293 cell lysate.

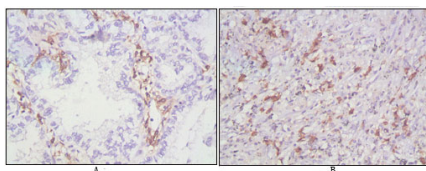


Figure 2: Immunohistochemical analysis of paraffin-embedded human lung cancer (A), lymphonodus tissue (B), showing cytomembrane localization using CD38 mouse mAb with DAB staining.

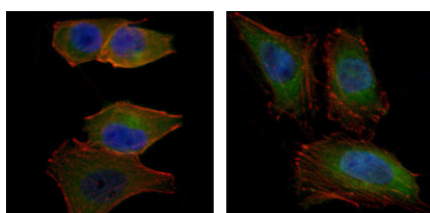


Figure 2: Immunofluorescence analysis of PANC-1 (left) and Hela (right) cells using AKT2 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.