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CD38 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2002a

Product Information

Application	WB, IHC, E
Primary Accession	P28907
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5C5C3
Isotype	IgG1
Calculated MW	34328
Description	CD38 is a novel multifunctional ectoenzyme widely expressed in cells and tissues especially in leukocytes. CD38 also functions in cell adhesion,signal transduction and calcium signaling.
Immunogen	Purified recombinant fragment of human CD38 (AA: Extra(43-300)) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% 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~~1/10000
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	Multifunctional transmembrane glycoprotein able to exert enzymatic

activities and also to mobilize calcium, to transduce signals, to adhere to hyaluronan and to other ligands. 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). Functions also as a receptor that binds the ligand CD31 on endothelial cells, promoting lymphocyte activation, proliferation, and migration across the endothelial barrier (PubMed:9551996). Involved in the regulation of crucial dendritic cell functions acquired at the mature stage, such as CCL21-driven migration, survival, and Th1-polarizing activity (PubMed:16293598). In lamina propria T lymphocytes, CD38/CD31 cognate interactions initiate a multistep signaling pathway resulting in activation of LCK anf LAT, followed by cytokine release (PubMed:11259373).

Cellular Location

Cell surface. Cell membrane; Single-pass type II membrane protein. Note=Localizes in membrane lipid domains.

Tissue Location

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

References

1. Biochem Biophys Res Commun. 2013 Dec 6;442(1-2):51-5.2. Mol Biol (Mosk). 2012 Sep-Oct;46(5):786-91.

Images

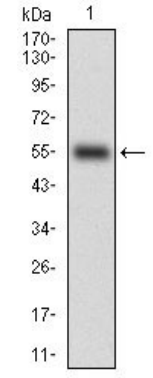


Figure 1: Western blot analysis using CD38 mAb against human CD38 (AA: Extra(43-300)) recombinant protein. (Expected MW is 56.1 kDa)

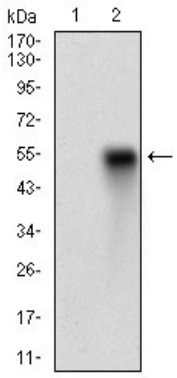
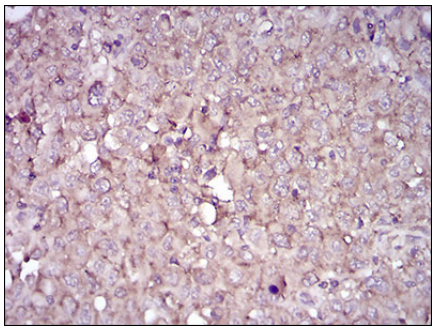


Figure 2: Western blot analysis using CD38 mAb against HEK293 (1) and CD38 (AA: Extra(43-300))-hIgGFc transfected HEK293 (2) cell lysate.

Figure 3: Western blot analysis using CD38 mouse mAb against HEK293 (1), LNcap (2) cell lysate.



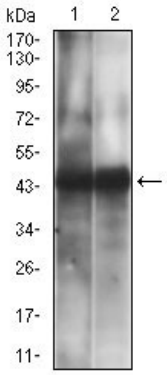


Figure 4: Immunohistochemical analysis of paraffin-embedded endometrial cancer tissues using CD38 mouse mAb with DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.