

# CD38 Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO2002a

## Product Information

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<b>Application</b>	WB, IHC, E
<b>Primary Accession</b>	<a href="#">P28907</a>
<b>Reactivity</b>	Human
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clone Names</b>	5C5C3
<b>Isotype</b>	IgG1
<b>Calculated MW</b>	34328
<b>Description</b>	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.
<b>Immunogen</b>	Purified recombinant fragment of human CD38 (AA: Extra(43-300)) expressed in E. Coli.
<b>Formulation</b>	Purified antibody in PBS with 0.05% sodium azide.

## Additional Information

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<b>Gene ID</b>	952
<b>Other Names</b>	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
<b>Dilution</b>	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 E~~1/10000
<b>Storage</b>	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.
<b>Precautions</b>	CD38 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	CD38
<b>Function</b>	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 and 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

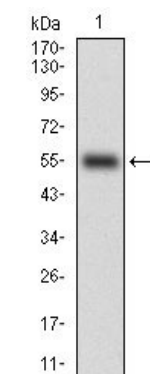


Figure 1: Western blot analysis using CD38 mAb against human CD38 (AA: Extra(43-300)) recombinant protein. (Expected MW is 56.1 kDa)

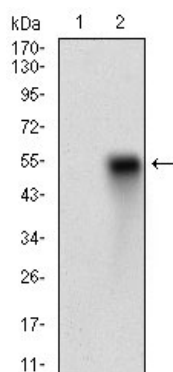


Figure 2: Western blot analysis using CD38 mAb against HEK293 (1) and CD38 (AA: Extra(43-300))-hIgGfC transfected HEK293 (2) cell lysate.

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

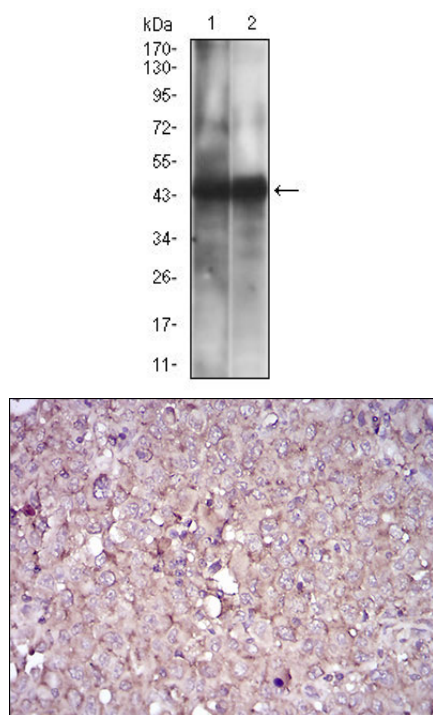


Figure 4: Immunohistochemical analysis of paraffin-embedded endometrial cancer tissues using CD38 mouse mAb with DAB staining.

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