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CD38 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2878b

Product Information

Application	WB, IHC-P, IF, FC, E
Primary Accession	P28907
Other Accession	Q5VAN0
Reactivity	Human
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18001
Calculated MW	34328
Antigen Region	241-270

Additional Information

Gene ID	952
Other Names	ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase 1, 2'-phospho-ADP-ribosyl cyclase, 2'-phospho-ADP-ribosyl cyclase/2'-phospho-cyclic-ADP-ribose transferase, 2'-phospho-cyclic-ADP-ribose transferase, ADP-ribosyl cyclase 1, ADPRC 1, Cyclic ADP-ribose hydrolase 1, cADPr hydrolase 1, T10, CD38, CD38
Target/Specificity	This CD38 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 241-270 amino acids from the C-terminal region of human CD38.
Dilution	WB~~1:2000 IHC-P~~1:100~500 IF~~1:10~50 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD38 Antibody (C-term) 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.

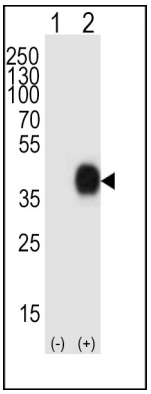
Background

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.

References

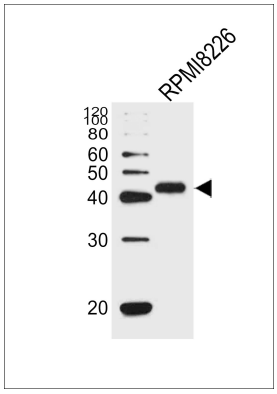
Horenstein,A.L., Mol. Med. 15 (3-4), 76-84 (2009) Liu,Q., Biochemistry 47 (52), 13966-13973 (2008) Liu,Q., Chem. Biol. 15 (10), 1068-1078 (2008)

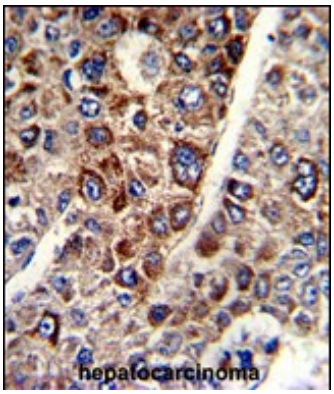
Images



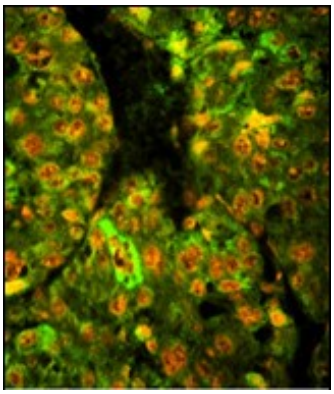
Western blot analysis of lysate from 293T cell line, using CD38 Antibody (C-term)(Cat. #AP2878b). AP2878b was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.

Western blot analysis of lysate from RPMI8226 cell line, using CD38 Antibody (C-term)(Cat. #AP2878b). AP2878b was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.

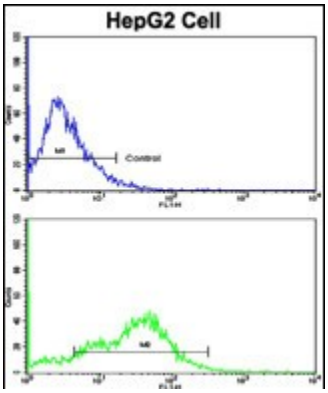




Formalin-fixed and paraffin-embedded human hepatocarcinoma with CD38 Antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

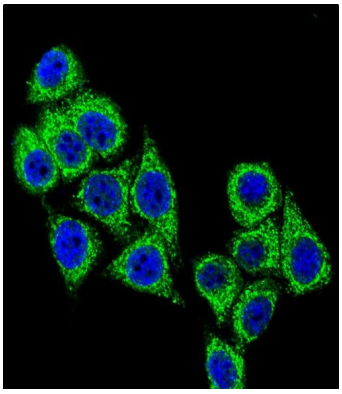


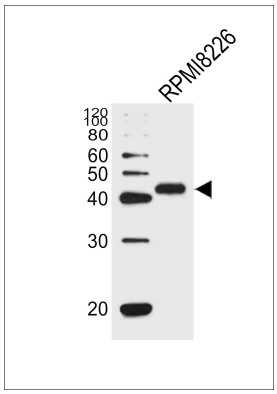
Immunofluorescence analysis of CD38 Antibody (C-term) with paraffin-embedded human hepatocarcinoma tissue . 0.05 mg/ml primary antibody was followed by FITC-conjugated goat anti-rabbit lgG (whole molecule). FITC emits green fluorescence.Red counterstaining is PI.



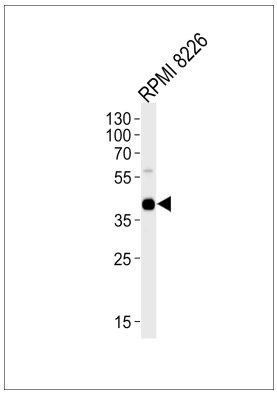
Flow cytometric analysis of HepG2 cells using CD38 Antibody (C-term)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Confocal immunofluorescent analysis of CD38 Antibody (C-term) (Cat. #AP2878b) with Hela cell followed by Alexa Fluor® 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).





Western blot analysis of lysate from RPMI 8226 cell line, using CD38 Antibody (C-term)(Cat. #AP2878b). AP2878b was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug.



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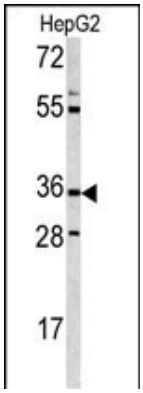
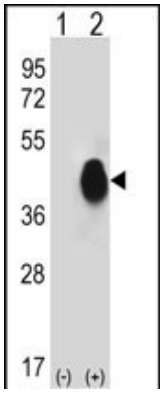


Western blot analysis of CD38 antibody (C-term) (Cat.# AP2878b) in HepG2 cell line lysates (35ug/lane). CD38 (arrow) was detected using the purified Pab.

Western blot analysis of CD38 (arrow) using rabbit polyclonal CD38 Antibody (C-term) (Cat.# AP2878b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the CD38 gene.



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