PRODUCT INFORMATION

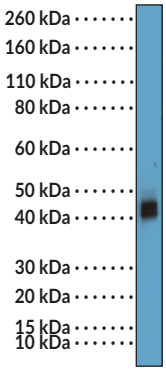
CD38 Rabbit Monoclonal Antibody (RM388)

Item No. 32324

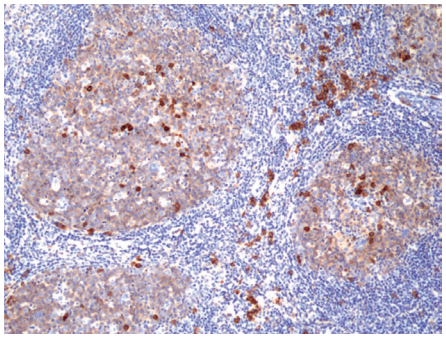
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	ADP-ribosyl Cyclase 1, cADPR Hydrolase 1, Cyclic ADP-ribose Hydrolase 1
Immunogen:	Peptide corresponding to residues near the C-terminus of human CD38
Cross Reactivity:	(+) CD38
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM388
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:200 for IHC and 1:1,000-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of human Jurkat cell lysate using CD38 Rabbit Monoclonal Antibody (RM388) at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human tonsil tissue using CD38 Rabbit Monoclonal Antibody (RM388) at a dilution of 1:100.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

CD38, also known as ADP-ribosyl cyclase 1, is a single-chain type II transmembrane glycoprotein with enzymatic activity and cell surface receptor functions that has roles in calcium signaling and immunomodulation.[1-3] It is composed of a C-terminal catalytic domain, which can be orientated towards the extracellular or intracellular environment, a transmembrane segment, and a short N-terminal cytoplasmic tail, which interacts with the tyrosine kinase Lck.[1,4] CD38 expression is induced by cytokine, interferon, or endotoxin stimulation in a variety of immune cells, including T cells, B cells, granulocytes, and natural killer (NK) cells, as well as malignant plasma cells, and predominantly localizes to lipid rafts.[1-3] It is also found in the nucleus and mitochondrial membrane, as well as in the cytoplasm.[1] CD38 regulates calcium signaling by catalyzing the formation of the intracellular calcium mobilizing messengers cyclic ADP-ribose and nicotinic acid adenine dinucleotide phosphate (NAADP).[5] It is a receptor for CD31, an adhesion molecule expressed by endothelial cells, and associates with a variety of signaling complexes, such as CD3/T cell receptor and CD19/CD21/B cell receptor complexes.[1,3] CD38 protein expression is increased on plasma cells isolated from patients with multiple myeloma.[6] Cayman's CD38 Rabbit Monoclonal Antibody (RM388) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

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3. Morandi, F., Airoldi, I., Marimpietri, D., *et al*. CD38, a receptor with multifunctional activities: From modulatory functions on regulatory cell subsets and extracellular vesicles, to a target for therapeutic strategies. *Cells* **8(12)**, 1527 (2019).
4. Malavasi, F., Deaglio, S., Funaro, A., *et al*. Evolution and function of the ADP ribosyl cyclase/CD38 gene family in physiology and pathology. *Physiol. Rev.* **88(3)**, 841-886 (2008).
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6. Li, T., Qi, S., Unger, M., *et al*. Immuno-targeting the multifunctional CD38 using nanobody. *Sci. Rep.* **6**, 27055 (2016).

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