

# PRODUCT INFORMATION



## CD38 Recombinant Monoclonal Antibody

Item No. 46629

### Overview and Properties

**CAS Registry No.:** 945721-28-8

**Contents:** This vial contains 500 µg or 5 mg of protein A-purified recombinant monoclonal antibody.

**Synonyms:** ADP-ribosyl Cyclase 1, cADPR Hydrolase 1, Cyclic ADP-ribose Hydrolase 1, Daratumumab

**Preparation:** This product is a recombinant monoclonal antibody expressed in HEK293 cells.

**Cross Reactivity:** (+) CD38

**Species Reactivity:** (+) Human

**Uniprot No.:** P28907

**Form:** Liquid

**Storage:** -20°C (as supplied)

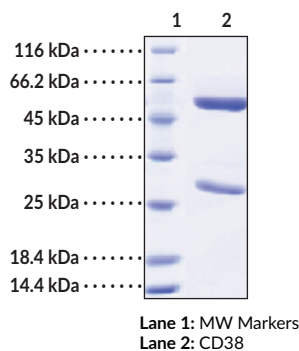
**Stability:** ≥1 year

**Storage Buffer:** Histidine and arginine buffer, pH 6.0, containing 120 mM sodium chloride and 0.02% polysorbate 80

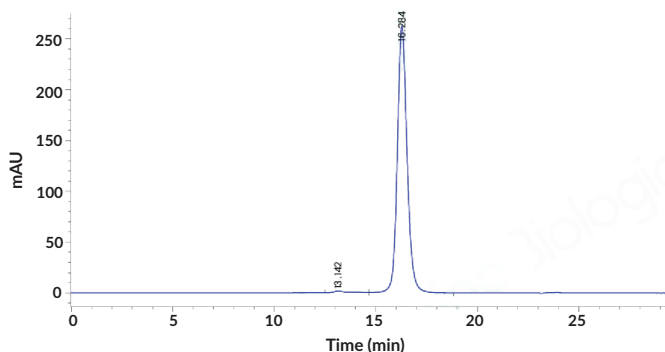
**Host:** Human

**Isotype:** IgG1κ

### Images



SDS-PAGE Analysis of CD38.



≥95% as determined by SEC-HPLC.

**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.<sup>1-3</sup> It is composed of a C-terminal catalytic domain, which can be oriented towards the extracellular or intracellular environment, a transmembrane segment, and a short N-terminal cytoplasmic tail, which interacts with the tyrosine kinase Lck.<sup>1,4</sup> 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.<sup>1-3</sup> It is also found in the nucleus and mitochondrial membrane, as well as in the cytoplasm.<sup>1</sup> CD38 regulates calcium signaling by catalyzing the formation of the intracellular calcium mobilizing messengers cyclic ADP-ribose and nicotinic acid adenine dinucleotide phosphate (NAADP).<sup>5</sup> 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.<sup>1,3</sup> Formulations containing monoclonal antibodies targeting CD38 have been used in the treatment of multiple myeloma. Cayman's CD38 Recombinant Monoclonal Antibody (Daratumumab) is a research-grade biosimilar of daratumumab that was produced recombinantly.

## References

1. Hogan, K.A., Chini, C.C.S., and Chini, E.N. The multi-faceted ecto-enzyme CD38: Roles in immunomodulation, cancer, aging, and metabolic diseases. *Front. Immunol.* **10**, 1187 (2019).
2. Bonello, F., D'Agostino, M., Moscvin, M., *et al.* CD38 as an immunotherapeutic target in multiple myeloma. *Expert Opin. Biol. Ther.* **18(12)**, 1209-1221 (2018).
3. Morandi, F., Airoidi, 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).
5. van de Donk, N.W.C.J., Richardson, P.G., and Malavasi, F. CD38 antibodies in multiple myeloma: Back to the future. *Blood* **131(1)**, 13-29 (2018).

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