

Recombinant Human CD38 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50154

Size: 10ug, 100ug

Protein Name: ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase 1 (EC 3.2.2.-) (EC 3.2.2.6) (2'-phospho-ADP-ribosyl cyclase) (2'-phospho-ADP-ribosyl cyclase/2'-phospho-cyclic-ADP-ribose transferase) (EC 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) (CD antigen CD38)

Synonym: CD38

UniProt ID: P28907

UniProt Link: www.uniprot.org/uniprotkb/P28907/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 300 AA

Molecular Weight: 34 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MANCEFSPVSGDKPCCRLSRRAQLCLGVSVILVLILVVVLAVVVPRWRQQWSGPGTTKRFPETVLAR
CVKYTEIHPEMRHVDQCQSVWDAFKGAFISKHPCNITEEDYQPLMKLGTQTVPCNKILLWSRIKDLAH
QFTQVQRDMFTLEDTLGLYADDLTWCGEFNTSKINYQSCPDWRKDCSNNPVSVFWKTVSRRFAE
AACDVVHVMLNGSRSKIFDKNSTFGSVEVHNLQPEKVQTLEAWVIHGGREDSRDLCQDPTIKELESII
SKRNIQFSCKNYRPDKFLQCVKNPEDSSCTSEI

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase 1 (EC 3.2.2.-) (EC 3.2.2.6) (2'-phospho-ADP-ribosyl cyclase) (2'-phospho-ADP-ribosyl cyclase/2'-phospho-cyclic-ADP-ribose transferase) (EC 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) (CD antigen CD38) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein 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 and LAT, followed by cytokine release (PubMed:11259373).

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

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.