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CD38

Catalog # PVGS1598

Product Information

Primary Accession	P28907
Species	Human
Sequence	Val43-Ile300
Purity	> 95% as analyzed by SDS-PAGE
Endotoxin Level	
Biological Activity	Immobilized CD38, Human at 1.0 μg/ml (100 μl/well) can bind Human CD38 Antibody (38.F2), Mouse with EC_{50}=1.640 ng/ml when detected by M6 Goat Anti Mouse (Fc).
Expression System	HEK 293
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 μg/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Additional Information

Gene ID	952
Other Names	ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase 1, 3.2.2.-, 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
Target Background	CD38 (also referred to as T10 antigen) is a nonlineage-restricted type II transmembrane glycoprotein that has emerged as an intracellular calcium ion mobilizing messenger. It can serve as an ectoenzyme that catalyzes the synthesis and hydrolysis of cyclic ADP-ribose. The enzymatic functions of CD38 probably contribute to an array of its immunoregulatory functions. It has been found on the surface of many immune cells (white blood cells), including CD4+, CD8+, B lymphocytes and natural killer cells. Soluble CD38 and the ability of membrane-bound CD38 to become internalized in response to appropriate stimuli suggest that extracellular and intracellular roles for this

protein are equally plausible.

Protein Information

Name	CD38
Function	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).
Cellular Location	Cell surface. Membrane; Single-pass type II membrane protein
Tissue Location	Expressed at high levels in pancreas, liver, kidney, brain, testis, ovary, placenta, malignant lymphoma and neuroblastoma.