

CD38 Protein, Human (Biotinylated, HEK293, His-Avi)

Cat. No.:	HY-P72356
Synonyms:	ADP-ribosyl cyclase1; 2'-phospho-ADP-ribosyl cyclase; ADP-ribosyl cyclase 1; Cyclic ADP-ribose hydrolase 1; cADPr hydrolase 1
Species:	Human
Source:	HEK293
Accession:	P28907 (V43-I300)
Gene ID:	952
Molecular Weight:	40-50 kDa

PROPERTIES

AA Sequence	<p>V P R W R Q Q W S G P G T T K R F P E T V L A R C V K Y T E I H P E M R H V D C</p> <p>Q S V W D A F K G A F I S K H P C N I T E E D Y Q P L M K L G T Q T V P C N K I</p> <p>L L W S R I K D L A H Q F T Q V Q R D M F T L E D T L L G Y L A D D L T W C G E</p> <p>F N T S K I N Y Q S C P D W R K D C S N N P V S V F W K T V S R R F A E A A C D</p> <p>V V H V M L N G S R S K I F D K N S T F G S V E V H N L Q P E K V Q T L E A W V</p> <p>I H G G R E D S R D L C Q D P T I K E L E S I I S K R N I Q F S C K N I Y R P D</p> <p>K F L Q C V K N P E D S S C T S E I</p>
Biological Activity	<p>1. Immobilized Anti-Human CD38 mAb at 2 µg/mL (100 µL/well) can bind Human CD38-His-Avi. The ED₅₀ of Human CD38-His-Avi is 13-24.54 ng/mL.</p> <p>2. Loaded Biotinylated Human CD38-His on HIS1K Biosensor, can bind Anti-Human CD38 mAb-Fc with an affinity constant of 0.006 nM as determined in BLI assay.</p>
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	The CD38 Protein assumes a pivotal role in cellular signaling, being a proficient synthesizer of cyclic ADP-ribose (cADPR), a
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recognized second messenger crucial for glucose-induced insulin secretion. Moreover, it facilitates the synthesis of the calcium mobilizer nicotinate-adenine dinucleotide phosphate, NAADP(+), derived from 2'-phospho-cADPR and nicotinic acid, as well as from NADP(+) and nicotinic acid. Operating at both pH 5.0 and pH 7.4, CD38 Protein exhibits a preference for transforming 2'-phospho-cADPR into NAADP(+) while selectively cleaving NADP(+) to cADPR and ADPRP rather than generating NADDP(+). Notably, it also showcases cADPR hydrolase activity, highlighting its multifaceted role in the dynamic regulation of these crucial signaling molecules. The integration of these activities underscores the significance of CD38 Protein in modulating cellular responses, particularly in the context of insulin secretion and calcium mobilization.

Caution: Product has not been fully validated for medical applications. For research use only.

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