

## CD38 Protein, Human (HEK293, C-His)

Cat. No.:	HY-P70731A
Synonyms:	ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase 1; ADP-ribosyl cyclase 1; Cyclic ADP-ribose hydrolase 1; CD38 antigen; CD38 molecule; CD38
Species:	Human
Source:	HEK293
Accession:	P28907 (V43-I300)
Gene ID:	952
Molecular Weight:	38-50 kDa

### PROPERTIES

AA Sequence	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 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 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 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 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 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 K F L Q C V K N P E      D S S C T S E I
Biological Activity	Data is not available.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 40 mM Tris-HCl, 150 mM NaCl, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	The CD38 Protein assumes a pivotal role in cellular signaling, being a proficient synthesizer of cyclic ADP-ribose (cADPR), a 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
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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.

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

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