

CMRF35-like molecule 1 Protein, Rat (Myc, His-SUMO)

Cat. No.:	HY-P71561
Synonyms:	Cd300lf; Clm1CMRF35-like molecule 1; CLM-1; CD300 antigen-like family member F; CD antigen CD300f
Species:	Rat
Source:	E. coli
Accession:	Q566E6 (19A-181S)
Gene ID:	287818
Molecular Weight:	Approximately 38.3 kDa

PROPERTIES

AA Sequence	<p>A Q D P V T G P E E V S G Y E Q G S L T V W C R Y G S W W K D Y S K Y W C R G P</p> <p>K R S S C E I R V E T D A S E R L V K E N H V S I R D D Q T N F T F T V T M E D</p> <p>L R M S D A G I Y W C G I T K A G Y D H M F K V H V S I N P V P T T P T T T S T</p> <p>T T I F T V T T T V K E T S T L S T Q T S H Y S D N R Y D S G G V G D G N G F L</p> <p>D L S</p>
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.
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 ₂ O.
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	<p>CMRF35-like molecule 1 (CLM-1) protein serves as an inhibitory receptor for myeloid cells and mast cells, playing a crucial role in immune homeostasis by modulating various immune responses. CLM-1 positively regulates the phagocytosis of apoptotic cells, known as efferocytosis, through the recognition and binding of phosphatidylserine (PS) on the surface of apoptotic cells. This activity promotes macrophage-mediated efferocytosis while inhibiting dendritic cell-mediated efferocytosis. Furthermore, CLM-1 negatively regulates Fc epsilon receptor-dependent mast cell activation and allergic responses by binding to ceramide and sphingomyelin as ligands. It may also function as a coreceptor for interleukin 4 (IL-4), interacting with and regulating IL-4 receptor alpha-mediated responses, thereby augmenting IL-4- and IL-13-induced signaling. In addition, CLM-1 negatively regulates Toll-like receptor (TLR) signaling by activating phosphatases PTPN6/SHP-1</p>
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and PTPN11/SHP-2. Beyond its immunomodulatory functions, CLM-1 inhibits osteoclast formation and induces macrophage cell death upon engagement. The protein interacts with PTPN6/SHP-1 in a tyrosine phosphorylation-dependent manner and associates with IL4R.

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

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