MBL2/COLEC1 Protein, Human (HEK293, His)

Cat. No.:	HY-P70281
Synonyms:	rHuMannose-binding protein C/MBL-2, His; Mannose-Binding Protein C; MBP-C; Collectin-1; MBP1; Mannan-Binding Protein; Mannose-Binding Lectin; MBL2; COLEC1; MBL
Species:	Human
Source:	HEK293
Accession:	P11226 (E21-I248)
Gene ID:	4153
Molecular Weight:	Approximately 31.0 kDa

PROPERTIES

AA Sequence	E T V T C E D A Q K T C P A V I A C S S P G I N G F P G K D G R D G T K G E K G E P G Q G L R G L Q G P P G K L G P P G N P G P S G S P G P K G Q K G D P G K S P D G D S S L A A S E R K A L Q T E M A R I K K W L T F S L G K Q V G N K F F L T N G E I M T F E K V K A L C V K F Q A S V A T P R N A A E N G A I Q N L I K E E A F L G I T D E K T E G Q F V D L T G N R L T Y T N W N E G E P N N A G S D E D C V L L L K N G Q W N D V P C S T S H L A V C E F P I
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, 5% Threhalose, pH 7.2.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. 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	MBL2, also known as COLEC1, is a calcium-dependent lectin actively involved in innate immune defense. This versatile protein binds to mannose, fucose, and N-acetylglucosamine on diverse microorganisms, initiating the lectin complement pathway. Furthermore, MBL2 exhibits a unique affinity for late apoptotic cells, apoptotic blebs, and necrotic cells, facilitating their efficient uptake by macrophages. Additionally, there is evidence suggesting its potential binding to DNA. In the context of SARS coronavirus-2 (SARS-CoV-2) infection, MBL2 plays a critical role in activating the complement lectin pathway, leading to the inhibition of SARS-CoV-2 infection and a reduction in the induced inflammatory response.

	Structurally, MBL2 forms oligomeric complexes composed of three or more homotrimers. Its functional interactions extend to MASP1, MASP2, MEP1A, MEP1B, and CR1, indicating its involvement in various regulatory and immune-related pathways.

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