MD2 Protein, Cynomolgus (His)

Cat. No.:	HY-P701066
Synonyms:	Lymphocyte antigen 96; LY96; ESOP1; ESOP-1; MD-2;
Species:	Cynomolgus
Source:	E. coli
Accession:	B3Y6B0 (Q19-N160)
Gene ID:	102118398
Molecular Weight:	17.97 kDa

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22μm filtered solution of 4mM HCL.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	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	MD2 Protein, a key player in the innate immune response, serves as a critical component in recognizing bacterial lipopolysaccharide (LPS) and coordinating immune reactions. It binds directly to LPS and collaborates with TLR4 to elicit the innate immune response to bacterial LPS. Moreover, MD2 works in tandem with TLR2, responding to cell wall components from both Gram-positive and Gram-negative bacteria. MD2's interaction with TLR4 enhances NF-kappa-B activation, emphasizing its role in signaling pathways. In cell contexts expressing both LY96 and TLR4, MD2 enables responsiveness to LPS, underlining its importance in the cellular recognition of bacterial components. Structurally, MD2 forms a heterogeneous homomer from homodimers linked by disulfide bonds and is a crucial component of the lipopolysaccharide (LPS) receptor complex, which includes at least CD14, LY96, and TLR4. MD2's ligand binding induces interactions with TLR4 and promotes the oligomerization of the complex, further highlighting its central role in the immune response to bacterial challenges.

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