CD14 Protein, Human (HEK293, Fc)

Cat. No.:	HY-P74333
Synonyms:	Monocyte Differentiation Antigen CD14; CD14
Species:	Human
Source:	HEK293
Accession:	P08571 (T20-C352)
Gene ID:	929
Molecular Weight:	75-85 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
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.
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	CD14 serves as a crucial coreceptor for bacterial lipopolysaccharide (LPS), playing a pivotal role in the innate immune response to microbial pathogens. In collaboration with LBP, CD14 binds monomeric LPS and facilitates its delivery to the LY96/TLR4 complex, initiating downstream signaling events. This process involves the activation of MyD88, TIRAP, and TRAF6, leading to NF-kappa-B activation, cytokine secretion, and the inflammatory response. Additionally, CD14 acts as a coreceptor for TLR2:TLR6 and TLR2:TLR1 heterodimers in response to diacylated and triacylated lipopeptides, respectively, with these clusters triggering signaling and subsequently translocating to the Golgi in a lipid-raft dependent pathway. CD14's interaction with electronegative LDL (LDL(-)) contributes to the cytokine release induced by LDL(-). CD14 is an integral component of the lipopolysaccharide (LPS) receptor complex, collaborating with LY96 and TLR4. Furthermore, it interacts with various partners, such as LPS-bound LBP, LPAR1, MYO18A, and FSTL1, underscoring its multifaceted role in immune responses and lipid metabolism.

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

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