

CD14 Protein, Rat (HEK293, His)

Cat. No.:	HY-P74331
Synonyms:	Monocyte Differentiation Antigen CD14; CD14
Species:	Rat
Source:	HEK293
Accession:	Q63691 (S18-Y341)
Gene ID:	60350
Molecular Weight:	Approximately 45-57 kDa due to the glycosylation.

PROPERTIES

AA Sequence	<p> S P A T P E P C E L D Q D E E S V R C Y C N F S D P Q P N W S S A F L C A G A E D V E F Y G G G R S L E Y L L K R V D T E A N L G Q Y T D I I R S L P L K R L T V R S A R V P T Q I L F G T L R V L G Y S G L R E L T L E N L E V T G T A L S P L L D A T G P D L N T L S L R N V S W A T T D T W L A E L Q Q W L K P G L K V L S I A Q A H S L N F S C K Q V G V F P A L A T L D L S D N P E L G E K G L I S A L C P H K F P T L Q V L A L R N A G M E T T S G V C S A L A A A R V P L Q A L D L S H N S L R D T A G T P S C D W P S Q L N S L N L S F T G L E H V P K G L P A K L S V L D L S Y N R L D R K P R P E E L P E V G S L S L T G N P F L H S E S Q S E A Y </p>
Biological Activity	Measured by its ability to enhance LPS-induced IL-6 secretion by mouse splenocytes. The ED ₅₀ for this effect is 0.488 µg/mL, corresponding to a specific activity is 2049.180 U/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
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. 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

CD14 Protein functions as a coreceptor for bacterial lipopolysaccharide (LPS), forming a multi-protein complex with LY96 and TLR4. Collaborating with LBP, it binds monomeric LPS and delivers it to the LY96/TLR4 complex, initiating the innate immune response. CD14's involvement extends to TLR2:TLR6 and TLR2:TLR1 heterodimers, responding to diacylated and triacylated lipopeptides, respectively. Through interactions with MyD88, TIRAP, and TRAF6, CD14 activates NF-kappa-B, leading to cytokine secretion and inflammation. Additionally, it participates in LDL(-)-induced cytokine release and interacts with LPAR1, MYO18A, and FSTL1, highlighting its diverse roles in immune and signaling pathways.

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

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