Human TLR4 / CD284 Protein (His Tag)

Catalog Number: **10146-H08B**

General Information

Gene Name Synonym:

ARMD10; CD284; TLR-4; TLR4; TOLL

Protein Construction:

A DNA sequence encoding the human TLR4 (Met 1-Lys631) (O00206-1) was expressed, with a C-terminal polyhistidine tag.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 87 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Glu 24

Molecular Mass:

The secreted recombinant human TLR4 consists of 619 amino acids and predicts a molecular mass of 70.5 KDa. The apparent molecular mass of the protein is approximately 68 Kda in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 10% gly

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

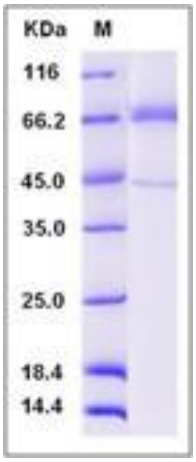
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

TLR4, also known as TLR-4, is a member of the Toll-like receptor (TLR) family, which plays a fundamental role in pathogen recognition and activation of innate immunity. TLRs are highly conserved from Drosophila to humans and share structural and functional similarities. They recognize pathogen-associated molecular patterns (PAMPs) that are expressed on infectious agents, and mediate the production of cytokines necessary for the development of effective immunity. TLR4 is most abundantly expressed in placenta, and in myelomonocytic subpopulation of the leukocytes. TLR 4 has also been designated as CD284 (cluster of differentiation 284). It has been implicated in signal transduction events induced by lipopolysaccharide (LPS) found in most gram-negative bacteria. TLR4 Cooperates with LY96 and CD14 to mediate the innate immune response to bacterial lipopolysaccharide (LPS). It acts via MYD88, TIRAP and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response. It is also involved in LPS-independent inflammatory responses triggered by Ni(2+).

References

1.Re, Fabio, *et al*. (2002) Monomeric recombinant MD-2 binds toll-like receptor 4 tightly and confers lipopolysaccharide responsiveness. J Biol Chem. 277(26):23427-32. 2.Shimazu, R, *et al*. (1999) MD-2, a Molecule that Confers Lipopolysaccharide Responsiveness on Toll-like Receptor 4. J Exp Med. 189(11):1777-82. 3.Blanco, A M, *et al*. (2005) Involvement of TLR4/type I IL-1 receptor signaling in the induction of inflammatory mediators and cell death induced by ethanol in cultured astrocytes. Journal of immunology. 175(10):6893-9.