

Recombinant Human TLR4 Protein, His-tagged

Cat. No. TLR4-141H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human TLR4 Protein with His tag was expressed in E. coli.

Species Human

Source E.coli

Description

Members of the Toll-like receptor (TLR) family, named for the closely related Toll receptor in *Drosophila*, play a pivotal role in innate immune responses. TLRs recognize conserved motifs found in various pathogens and mediate defense responses. Triggering of the TLR pathway leads to the activation of NF- κ B and subsequent regulation of immune and inflammatory genes. The TLRs and members of the IL-1 receptor family share a conserved stretch of approximately 200 amino acids known as the Toll/Interleukin-1 receptor (TIR) domain. Upon activation, TLRs associate with a number of cytoplasmic adaptor proteins containing TIR domains, including myeloid differentiation factor 88 (MyD88), MyD88-adaptor-like/TIR-associated protein (MAL/TIRAP), Toll-receptor-associated activator of interferon (TRIF), and Toll-receptor-associated molecule (TRAM). This association leads to the recruitment and activation of IRAK1 and IRAK4, which form a complex with TRAF6 to activate TAK1 and IKK. Activation of IKK leads to the degradation of I κ B, which normally maintains NF- κ B in an inactive state by sequestering it in the cytoplasm. Toll-like receptor 4 (TLR4) functions in association with MD-2 in the recognition and initiation of immune responses elicited by lipopolysaccharide (LPS) of Gram-negative bacteria. TLR4 triggers the activation of NF- κ B, IRF-3, and MAPK pathways leading to the production of inflammatory cytokines.

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Molecular Mass	~60 kDa
AA Sequence	<p>ESWEPCVEVVPNITYQCMELNFYKIPDNLPFSTKNLDLSFNPLRHLGSSFFSFPEL QVLDLSRCEIQTIEDGAYQSLSHLSTLILTGNPIQSLALGAFSGLSSLQKLVAVETNLA SLENFPIGHLKTLKELNVAHNLIQSFKLPEYFSNLTNLEHLDLSSNKIQSIYCTDLRVLH QMPLLNLSDLSLNP MNFIQPGAFKEIRLHKLTLRNNFDSLNMKTCIQGLAGLEVHR LVLGFEFRNEGNLEKFDKSALEGLCNLTIEEFRLAYLDYYLDDIIDLFNCLTNVSSFSLV SVTIERVKDFSYNFGWQHLELVNCKFGQPPTLKLKSLKRLTFTSNKGGNAFSEVDLP SLEFLDLSRNGLSFKGCCSQSDFGTTSLKYLDLSFNGVITMSSNFLGLEQLEHLDFQ HSNLKQMSEFSVFLSLRNLIYLDISHTHTRVAFNGIFNGLSSLEVLK MAGNSFQENFL PDIFTELRNLTFLDLSQCQLEQLSPTAFNSLSSLQVLNMSHNNFFSLDTPYKCLNSL QVLDYSLNHIMTSKKQELQHFPSSLAFNLNTQNDFACTCEHQSFQWIKDQRQLLVE VERMECATPSDKQGMPVLSL NITCQMNK</p>
Purity	Transferred into competent cells and the supernatant was purified by NI column affinity chromatography and the purity is > 85% (by SDS-PAGE).
Notes	For research use only, not for use in diagnostic procedure.
Storage	Store at 4 centigrade short term. Aliquot and store at -20 centigrade long term. Avoid freeze-thaw cycles.
Storage Buffer	PBS, 4M Urea, pH7.4

GENE INFORMATION

Gene Name	TLR4 toll-like receptor 4 [Homo sapiens (human)]
Official Symbol	TLR4
Synonyms	TLR4; toll-like receptor 4; CD284; hToll; TLR 4; homolog of Drosophila toll; TOLL;

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TLR-4; ARMD10;

Gene ID 7099

mRNA Refseq NM_003266

Protein Refseq NP_003257

MIM 603030

UniProt ID O00206

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