

Recombinant Human TLR9 Protein, His-tagged

Cat. No. TLR9-115H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human TLR9 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-κB 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 IκB, which normally maintains NF-κB in an inactive state by sequestering it in the cytoplasm. TLR9 is highly expressed in macrophages, dendritic cells, and B lymphocytes, and in humans has five isoforms generated by alternative splicing. TLR9 binds to unmethylated CpG motifs present on bacterial DNA and stimulates NF-κB via the MyD88 adaptor protein. In contrast to most TLR family members that are localized to the plasma membrane, TLR9 is an intracellular receptor localized to the ER

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in resting cells. Upon binding to CpG DNA, TLR9 is proteolytically processed and translocates to endo-lysosomal compartments where it binds MyD88, initiating downstream signaling.

Molecular Mass ~95 kDa

AA Sequence

MLGTLPAFLPCELQPHGLVNCNWFLKSVPHFSMAAPRGNVTSLSLSSNRIHHLHD
 SDFAHLPRLHLNLKWNCPVGLSPMHFPCMTIEPSTFLAVPTLEELNLSYNNIMT
 VPALPKSLISLSLSTHNILMLDSASLAGLHALRFLFMDGNCYKNPCRQALEVAPGAL
 LGLGNLTHLSLKYNNTLVPRNLPSSLEYLLLSYNRIVKLAPEDLANLTALRVLDVGG
 NCRRCDHAPNPCMECPRHFPQLHPDTFSHLSRLEGLVLKDSLSWLNASWFRGLG
 NLRVLDLSENFYKCYTKAFQGLTQLRKLNLSTFNYQKRVSTFAHLSLAPSTFGSLVAL
 KELDMHGIFFRSLDETTLRPLARLPMLQTLRLQMNFINQAQLGIFRAFPGLRYVDLSD
 NRISGASELTATMGEADGGEKVWLQPGDLAPAPVDTSPSEDPRPNCSTLNFTLDLS
 RNNLVTVQPEMFAQLSHLQCLRLSHNCISQAVNGSQFLPLTGLQVLDLSHNKLDLYH
 EHSFTELPRLEALDLSYNSQPFGMQGVGHNFVVAHLRTRLRHLSLAHNNIHSQVSQ
 QLCSTSLRALDFSGNALGHMWAEGDLYLHFFQGLSGLIWLDSLQNRLHTLLPQTLR
 NLPKSLQVLRRLRDNYLAFFKWWSLHFLPKLEVLDLAGNQLKALTNGSLPAGTRLRRL
 DVSCNSISFVAPGFFSKAKELRELNLSANALKTVDSWFGPLASALQILDVSANPLHC
 ACGAAFMDFLLEVQAAVPGLPSRVKCGSPGQLQGLSIFAQDLRLCLDEALSWDC

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

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GENE INFORMATION

Gene Name	TLR9 toll-like receptor 9 [Homo sapiens (human)]
Official Symbol	TLR9
Synonyms	TLR9; toll-like receptor 9; CD289;
Gene ID	54106
mRNA Refseq	NM_017442
Protein Refseq	NP_059138
MIM	605474
UniProt ID	Q9NR96

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