

## 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- $\kappa$ 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 $\kappa$ B, which normally maintains NF- $\kappa$ B 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- $\kappa$ B 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**

MLGTLPAFLPCELQPHGLVNCNWFLKSVPHFSMAAPRGNVTLSLSLSSNRIHHLHD  
 SDFAHLPRLHLNLKWNCPPVGLSPMHFPCMTIEPSTFLAVPTLEELNLSYNNIMT  
 VPALPKSLISLSLSTHTNILMLDSASLAGLHALRFLFMDGNCYKPCRQALEVAPGAL  
 LGLGNLTHLSLKYNNLTVVPRNLPSSLEYLLLSYNRIVKLAPEDLANLTALRVLDVGG  
 NCRRCDHAPNPCMECPRHFPQLHPDTFSHLSRLEGLVLKDSLSLWLNASWFRGLG  
 NLRVLDLSENFYKCYTKTKAFQGLTQLRKLNLSFNKRVSFVHLVSLAPVDFGSLVAL  
 KELDMHGIFFRSLDETTLRPLARLPLMLQTLRLQMNFINQAQLGIFRAFPGLRYVDLSD  
 NRISGASELTATMGEADGGEKVWLQPGDLAPAPVDTPSSEDFRPNCSTLNFTLDLS  
 RNNLVTVQPEMFAQLSHLQCLRLSHNCISQAVNGSQFLPLTGLQVLDLSHNKLDLYH  
 EHSFTELPRLEALDLSYNSQPFGMQGVGHNFVVAHLRTRLRHLSLAHNNIHSQVVSQ  
 QLCSTSLRALDFSGNALGHMWAEGDLYLHFFQGLSGLIWLDSLQNRLHTLLPQTLR  
 NLPKSLQVLRRLRDNYLAFFKWWSLHFLPKLEVLDLAGNQLKALTNGSLPAGTRLRRL  
 DVSCNSISFVAPGFFSKAKELRELNLSANALKTVDHVDFGGLASALQILDVSNPLHC  
 ACGAAFMDLLEVQAAVPGLPSRVKCGSPGQLQGLSIFAQDLRLCLDEALSWDC

**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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