

## TLR4

**Reactivity:**Human Mouse Rat Bovine

**Tested applications:**WB IHC

**Recommended Dilution:**WB 1:200 - 1:500 IHC 1:20 - 1:100

**Calculated MW:**96kDa

**Observed MW:**Refer to Figures

**Immunogen:**

Recombinant protein of human TLR4

**Storage Buffer:**

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

**Concentration:**

5

**Synonym:**

TLR4;ARMD10;CD284;TOLL;hToll

**Catalog #:**A0007

**Antibody Type:**

Polyclonal Antibody

**Species:**Rabbit

**Gene ID:**7099

**Isotype:**IgG

**Swiss Prot:**O00206

**Purity:**Affinity purification

For research use only.

**Background:**

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 (1-3). 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 TIR domain. Upon activation, TLRs associate with a number of cytoplasmic adaptor proteins containing TIR domains including MyD88 (myeloid differentiation factor), MAL/TIRAP (MyD88-adaptor-like/TIR-associated protein), TRIF (Toll-receptor-associated activator of interferon), and TRAM (Toll-receptor-associated molecule). 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 that normally maintains NF- $\kappa$ B inactivity by sequestering it in the cytoplasm. TLR4 functions in association with MD-2 in the recognition and initiation of immune responses elicited by lipopolysaccharide (LPS) of Gram-negative bacteria (4-8). TLR4 triggers the activation of NF- $\kappa$ B, IRF-3, and MAPK pathways leading to the production of inflammatory cytokines (9).

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