Toll-like Receptor 4 (D8L5W) Rabbit mAb (Mouse Specific)

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications: W—Western  IP—Immunoprecipitation  IHC—Immunohistochemistry  ChIP—Chromatin Immunoprecipitation

#14358

Store at -20°C

**Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:
Western blotting 1:1000

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

Species/Cross-Reactivity* Molecular Wt. Isotype

Endogenous

W M 100-135 kDa Rabbit IgG**

Endogenous

**Species cross-reactivity is determined by western blot.

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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 (1-4). TLRs recognize conserved motifs found in various pathogens and mediate defense responses (5-7). Triggering of the TLR pathway leads to the activation of NF-κB and subsequent regulation of immune and inflammatory genes (4). 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 (1). 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) (8-10). This association leads to the recruitment and activation of IRAK1 and IRAK4, which form a complex with TRAF6 to activate TAK1 and IKK (8,11-14). Activation of IKK leads to the degradation of IκB, which normally maintains NF-κB in an inactive state 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-κB, IRF-3, and MAPK pathways leading to the production of inflammatory cytokines (9).

Specificity/Sensitivity: Toll-like Receptor 4 (D8L5W) Rabbit mAb (Mouse Specific) recognizes endogenous levels of total Toll-like receptor 4 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with recombinant mouse Toll-like receptor 4 protein.

Background References:

Western blot analysis of extracts from various cell lines using Toll-like Receptor 4 (D8L5W) Rabbit mAb (Mouse Specific).

Western blot analysis of extracts from 293T cells, mock transfected (-) or transfected with a construct expressing full-length mouse Toll-like receptor 4 (mTLR4; +), using Toll-like Receptor 4 (D8L5W) Rabbit mAb (Mouse Specific).

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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