

#2209 Store at -20°C

Toll-like Receptor 1 Antibody



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Applications: WB	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 86	Source: Rabbit	UniProt ID: #Q15399	Entrez-Gene Id: 7096
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Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	Toll-like Receptor 1 Antibody detects endogenous levels of total TLR1 protein.	
Species predicted to react based on 100% sequence homology:	Monkey	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues at the amino terminus of human TLR1 protein. Antibodies were purified by peptide affinity chromatography.	
Background	Members of the Toll-like receptor (TLR) family, named for the closely related Toll receptor in <i>Drosophila</i>, 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. Toll-like receptor expression is highest in peripheral blood leukocytes, monocytes, macrophages, though TLR1 expression may be less restricted than other family members (4,5). TLR1 associates with TLR2 to cooperatively mediate immune responses to bacterial lipoproteins and lead to NF-κB activation (6,7). TLR1 shows highest homology to TLR6, which shares 69% sequence identity (8).	

Background References	1. Akira, S. (2003) <i>J Biol Chem</i> 278, 38105-8. 2. Beutler, B. (2004) <i>Nature</i> 430, 257-63. 3. Dunne, A. and O'Neill, L.A. (2003) <i>Sci STKE</i> 2003, re3. 4. Medzhitov, R. et al. (1997) <i>Nature</i> 388, 394-7. 5. Schwandner, R. et al. (1999) <i>J Biol Chem</i> 274, 17406-9. 6. Takeuchi, O. et al. (1999) <i>Immunity</i> 11, 443-51. 7. Alexopoulou, L. et al. (2001) <i>Nature</i> 413, 732-8. 8. Zhang, F.X. et al. (1999) <i>J Biol Chem</i> 274, 7611-4. 9. Hornig, T. et al. (2001) <i>Nat Immunol</i> 2, 835-41. 10. Oshiumi, H. et al. (2003) <i>Nat Immunol</i> 4, 161-7. 11. Muzio, M. et al. (1997) <i>Science</i> 278, 1612-5. 12. Wesche, H. et al. (1997) <i>Immunity</i> 7, 837-47. 13. Suzuki, N. et al. (2002) <i>Nature</i> 416, 750-6. 14. Irie, T. et al. (2000) <i>FEBS Lett</i> 467, 160-4. 15. Muzio, M. et al. (2000) <i>J Leukoc Biol</i> 67, 450-6. 16. Ochoa, M.T. et al. (2003) <i>Immunology</i> 108, 10-5. 17. Takeuchi, O. et al. (2002) <i>J Immunol</i> 169, 10-4. 18. Sandor, F. et al. (2003) <i>J Cell Biol</i> 162, 1099-110.
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Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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