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Toll-like Receptor 3 (D10F10) Rabbit mAb



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	115-130	Rabbit IgG	#O15455	7098

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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	Toll-like Receptor 3 (D10F10) Rabbit mAb recognizes endogenous levels of total TLR3 protein. A band is detected at 75 kDa in some cell lines/tissues which is of unknown origin.	
Species predicted to react based on 100% sequence homology:	Monkey	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val495 of human TLR3 protein.	
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. TLR3 functions as a receptor for double-stranded (ds)RNA typically associated with viral infection (4). It was originally shown to be specifically expressed in dendritic cells of the leukocyte family (5). TLR3 has also been found in placenta and lung, and can be induced by LPS in a variety of tissues (4,6). TLR3 is predominantly localized to early endosomes (7,8). Binding of dsRNA, or the analog polyinosine-polycytidylic acid (pIpC), to TLR3 triggers activation of transcription factors NF-κB and IRF3 through the adaptor protein TICAM-1/TRIF (9,10). TRIF associates with members of the TRAF family and with RIP that combine to activate NF-κB and IRF3 (11-13).	

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. Alexopoulou, L. et al. (2001) <i>Nature</i> 413, 732-8.
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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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