Revision 1

Store at -20C

#4748

Tollip Antibody

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H Mk	Endogenous	33	Rabbit	#Q9H0E2	54472

Product Usage Information

Application	Dilution
Western Blotting	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

Tollip Antibody detects endogenous levels of total Tollip protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding cysteine 229 of human Tollip. Antibodies are purified by protein A and peptide affinity chromatography.

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 adapter proteins containing TIR domains, including myeloid differentiation factor 88 (MyD88), MyD88-adapter-like/TIR-associated protein (MAL/TIRAP), TIR domain-containing adapter-inducing IFN-β (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.

Tollip (Toll interacting protein) is an adaptor protein discovered to be associated with the IRAK complex and recruited to IL1-R following IL-1 stimulation (4). Overexpression of Tollip results in impaired NF-κB signaling (4). Tollip also associates directly with TLR2 and TLR4 and inhibits TLR-mediated signaling through inhibition of IRAK (5). Studies of Tollip deficient mice suggest that it plays a role in the regulation of inflammatory cytokines in response to IL-1 and LPS (6).

Background References

1. Akira, S. (2003) *J Biol Chem* 278, 38105-8.
2. Beutler, B. (2004) *Nature* 430, 257-63.
3. Dunne, A. and O'Neill, L.A. (2003) *Sci STKE* 2003, re3.
4. Medzhitov, R. et al. (1997) *Nature* 388, 394-7.
5. Schwandner, R. et al. (1999) *J Biol Chem* 274, 17406-9.
6. Takeuchi, O. et al. (1999) *Immunity* 11, 443-51.
7. Alexopoulou, L. et al. (2001) *Nature* 413, 732-8.
8. Zhang, F.X. et al. (1999) *J Biol Chem* 274, 7611-4.
9. Horng, T. et al. (2001) *Nat Immunol* 2, 835-41.
10. Oshiumi, H. et al. (2003) *Nat Immunol* 4, 161-7.
11. Muzio, M. et al. (1997) *Science* 278, 1612-5.
12. Wesche, H. et al. (1997) *Immunity* 7, 837-47.
13. Suzuki, N. et al. (2002) *Nature* 416, 750-6.
14. Irie, T. et al. (2000) *FEBS Lett* 467, 160-4.
15. Burns, K. et al. (2000) *Nat. Cell Biol.* 2, 346-351.
16. Zhang, G. and Ghosh, S. (2002) *J. Biol. Chem.* 277, 7059-7065.
17. Didierlaurent, A. et al. (2006) *Mol. Cell Biol.* 26, 735-742.

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

W: Western Blotting

Cross-Reactivity Key

H: Human **Mk:** Monkey

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.