

#3699

Store at -20C

MyD88 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: WB	Reactivity: H Mk	Sensitivity: Endogenous	MW (kDa): 33	Source: Rabbit	UniProt ID: #Q99836	Entrez-Gene Id: 4615
----------------------------	----------------------------	-----------------------------------	------------------------	--------------------------	-------------------------------	--------------------------------

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	MyD88 Antibody detects endogenous levels of total MyD88 protein.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding lysine 119 of human MyD88. Antibodies were 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- κ B 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 I κ B, which normally maintains NF- κ B in an inactive state by sequestering it in the cytoplasm.

MyD88 was originally isolated as a myeloid differentiation primary response gene that is rapidly induced upon IL-6 stimulated differentiation of M1 myeloleukemic cells into macrophages (15-17). It contains an amino-terminal death domain separated from a carboxyl-terminal TIR domain and functions as an adaptor in TLR/IL-1 receptor signaling (18). The death domain of MyD88 mediates interactions with the IRAK complex triggering a signaling cascade that includes the activation of NF- κ B (19,20).

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. Hornig, 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. Harroch, S. et al. (1995) *Nucleic Acids Res.* 23, 3539-46.
16. Hardiman, G. et al. (1996) *Oncogene* 13, 2467-75.
17. Bonnert, T.P. et al. (1997) *FEBS Lett.* 402, 81-4.
18. Medzhitov, R. et al. (1998) *Mol. Cell* 2, 253-8.
19. Wesche, H. et al. (1997) *Immunity* 7, 837-47.
20. Muzio, M. et al. (1997) *Science* 278, 1612-5.

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

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

Orders: 877-616-CELL (2355) • orders@cellsignal.com • Support: 877-678-TECH (8324) • info@cellsignal.com • Web: cellsignal.com

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.