

SARM1 (D2M5I) Rabbit mAb

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

Applications: W, IP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 73	Source/Isotype: Rabbit IgG	UniProt ID: #Q6SZW1	Entrez-Gene Id: 23098
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:100

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

SARM1 (D2M5I) Rabbit mAb recognizes endogenous levels of total human SARM1 protein and transfected levels of total mouse SARM1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro324 of human SARM1 protein.

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.

Sterile alpha and TIR motif-containing protein 1 (SARM1) is a TIR domain-containing adaptor protein that contains two sterile alpha motif (SAM) domains (15). SARM1 is the only known TIR domain-containing adaptor that does not activate NF-κB, but instead negatively regulates toll-like receptor signaling (16). Research studies suggest that SARM1 inhibits signaling by TLR3 and TLR4 through direct interaction with the TIR domain-containing adapter TRIF, which is required for TLR3 and MyD88-independent TLR4 signaling (16-18). Additional research indicates that SARM1 can mediate injury-induced axon death, neuronal cell death in response to infection with the encephalitis-causing La Crosse virus, and T cell death following an immune response to infection (19-21).

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. Mink, M. et al. (2001) *Genomics* 74, 234-44.
16. Carty, M. et al. (2006) *Nat Immunol* 7, 1074-81.
17. Yamamoto, M. et al. (2002) *J Immunol* 169, 6668-72.
18. Yamamoto, M. et al. (2003) *Science* 301, 640-3.
19. Osterloh, J.M. et al. (2012) *Science* 337, 481-4.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	W: Western Blotting IP: Immunoprecipitation
Cross-Reactivity Key	H: Human
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