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MD-2 Antibody [9F1B1]

Catalog # ASC11995

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9Y6Y9
Other Accession	NP_056179, 223555998
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	9F1B1
Calculated MW	18546
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	MD-2 antibody can be used for detection of MD-2 by Western blot at 1 μg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 μg/mL. For immunofluorescence start at 20 μg/mL.

Additional Information

Gene ID	23643
Other Names	Lymphocyte antigen 96, Ly-96, ESOP-1, Protein MD-2, LY96, ESOP1, MD2
Target/Specificity	LY96;
Reconstitution & Storage	MD-2 monoclonal antibody can be stored at -20℃, stable for one year.
Precautions	MD-2 Antibody [9F1B1] is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LY96
Synonyms	ESOP1, MD2
Function	Binds bacterial lipopolysaccharide (LPS) (PubMed: 17569869, PubMed:17803912). Cooperates with TLR4 in the innate immune response to bacterial lipopolysaccharide (LPS), and with TLR2 in the response to cell wall components from Gram-positive and Gram-negative bacteria (PubMed:11160242, PubMed:11593030). Enhances TLR4-dependent activation of NF-kappa-B (PubMed:10359581). Cells expressing both LY96 and TLR4, but not TLR4 alone, respond to LPS (PubMed:10359581).
Cellular Location	Secreted, extracellular space. Secreted Note=Retained in the extracellular space at the cell surface by interaction with TLR4 (PubMed:10359581).

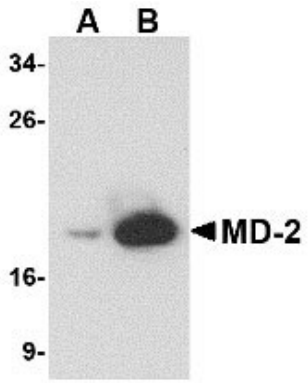
Background

MD-2 Monoclonal Antibody: MD-2 is a member of the Toll/interleukin-1 receptor (TIR) family, a group of proteins that include the Toll-like receptors (TLRs). TLRs are signaling molecules that recognize different pathogen-associated molecular patterns (PAMPs) and serve as an important link between the innate and adaptive immune responses. TLR4, the major signaling receptor for lipopolysaccharide (LPS), requires the binding of MD-2 to its extracellular region for maximal response to LPS. The specificity of this response is determined by the species of MD-2; e.g., human MD-2 transfected into mouse cells can cause mouse TLR4 to react to LPS analogs that are normally antagonistic to human but not mouse TLR4.

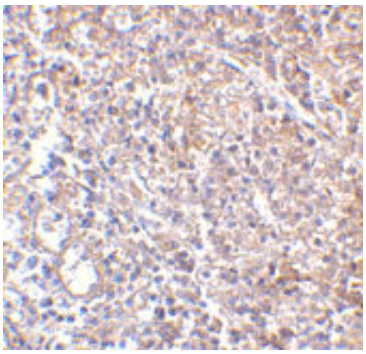
References

O'Neill LAJ, Fitzgerald FA, and Bowie AG. The Toll-IL-1 receptor adaptor family grows to five members. Trends in Imm. 2003; 24:286-9.
Vogel SN, Fitzgerald KA, and Fenton MJ. TLRs: differential adapter utilization by toll-like receptors mediates TLR-specific patterns of gene expression. Mol. Interv. 2003; 3:466-77.
Takeda K, Kaisho T, and Akira S. Toll-like receptors. Annu. Rev. Immunol. 2003; 21:335-76.
Janeway CA Jr and Medzhitov R. Innate immune recognition. Annu. Rev. Immunol. 2002; 20:197-216.

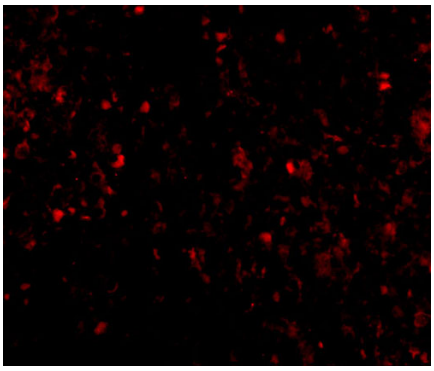
Images



Western blot analysis of (A) 25 and (B) 125 ng of MD-2 recombinant protein with MD-2 antibody at 1 µg/mL.



Immunohistochemistry of MD-2 in human spleen with MD-2 antibody at 2.5 µg/mL.



Immunofluorescence of MD2 in human spleen tissue with MD2 antibody at 20 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.