

MD-2 Antibody [1A2E3]

Catalog # ASC11996

Product Information

Application	WB, E, IHC-P
Primary Accession	Q9Y6Y9
Other Accession	NP_056179 , 223555998
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	1A2E3
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 μ g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 μ g/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°C, stable for one year.
Precautions	MD-2 Antibody [1A2E3] 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

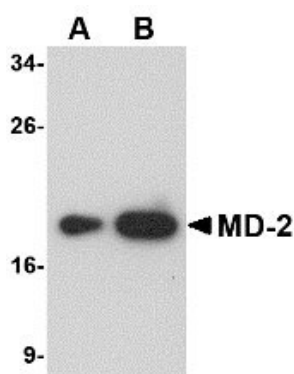
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Vogel SN, Fitzgerald KA, and Fenton MJ. TLRs: differential adapter utilization by toll-like receptors mediates TLR-specific patterns of gene expression. *Mol. Interv.* 2003; 3:466-77.

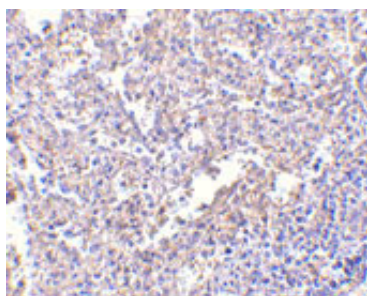
Takeda K, Kaisho T, and Akira S. Toll-like receptors. *Annu. Rev. Immunol.* 2003; 21:335-76.

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 μ g/mL.



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

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