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MD-2 Antibody

Catalog # ASC10237

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9Y6Y9
Other Accession	NP_056179, 223555998
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
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 0.5 to 2 g/mL. Antibody can also be used for immunohistochemistry starting at 2 g/mL. For immunofluorescence start at 10 g/mL.

Additional Information

Gene ID	23643
Other Names	MD-2 Antibody: MD2, MD-2, ly-96, ESOP-1, ESOP1, MD2, Lymphocyte antigen 96, Ly-96, lymphocyte antigen 96
Target/Specificity	LY96;
Reconstitution & Storage	MD-2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	MD-2 Antibody 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).

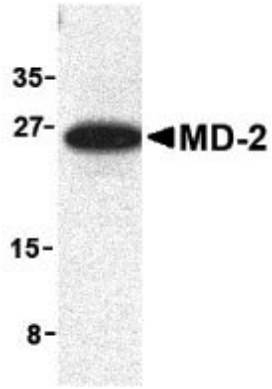
Background

MD-2 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 can cause mouse TLR4 to react to LPS analogs that are normally antagonistic to human but not mouse TLR4.

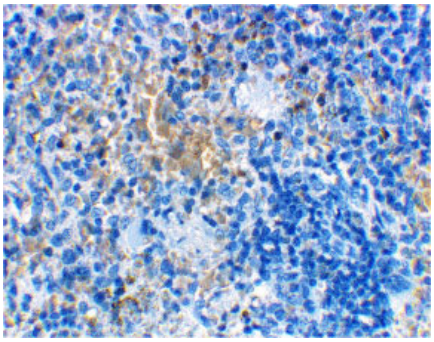
References

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

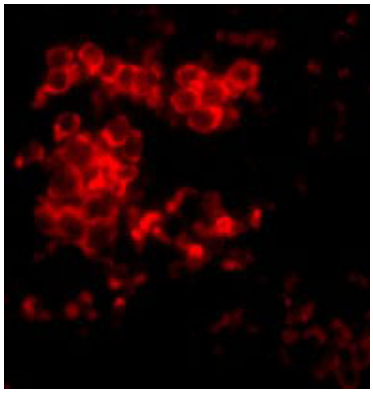


Western blot analysis of MD-2 in mouse spleen cell lysate with MD-2 antibody at 1 µg/mL.



Immunohistochemical staining of rat spleen cells using MD-2 antibody at 2 µg/mL.

Immunofluorescence of MD-2 in Rat Spleen tissue with MD-2 antibody at 10 µg/mL.



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