10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MD-1 Antibody

Catalog # ASC10432

Product Information

Application	WB, E, IHC-P
Primary Accession	O95711
Other Accession	NP_004262, 4758708
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	17906
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	MD-1 antibody can be used for the detection of MD-1 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL.

Additional Information

Gene ID	9450
Other Names	MD-1 Antibody: MD-1, MMD-1, dJ80N2.1, MD1, Lymphocyte antigen 86, Protein MD-1, Ly-86, lymphocyte antigen 86
Target/Specificity	LY86;
Reconstitution & Storage	MD-1 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-1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LY86
Synonyms	MD1
Function	May cooperate with CD180 and TLR4 to mediate the innate immune response to bacterial lipopolysaccharide (LPS) and cytokine production. Important for efficient CD180 cell surface expression (By similarity).
Cellular Location	Secreted, extracellular space. Note=Associated with CD180 at the cell surface
Tissue Location	Highly expressed in B-cells, monocytes and tonsil.

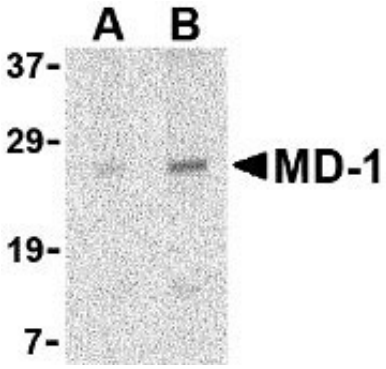
Background

MD-1 Antibody: Toll-like receptors (TLRs) are evolutionarily conserved pattern-recognition molecules that recognize different microbial products during infection and serve as an important link between the innate and adaptive immune responses. The signaling of these TLRs is kept under tight control by the expression of endogenous inhibiting proteins such as RP105, a recently identified homolog of TLR4. This protein, in association with MD-1, interacts with and inhibits the TLR4/MD-2 signaling pathway. While MD-2 can directly bind to LPS, one of the activating molecules of TLR4, the function of MD-1 is less well-known. It has been suggested however, that the RP105/MD-1 complex influences antibody production mediated by both TLR4/MD-2 and TLR2 receptor complexes.

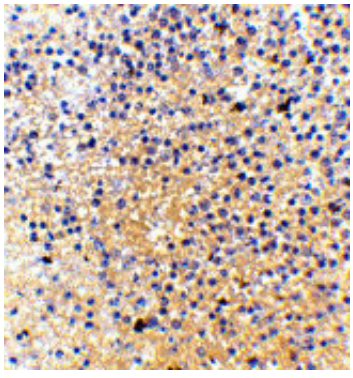
References

Takeda K, Kaisho T, and Akira S. Toll-like receptors. Annu. Rev. Immunol. 2003; 21:335-76.
Divanovic S, Trompette A, Atabani SF, et al. Inhibition of TLR-4/MD-2 signaling by RP105/MD-1. J. Endotoxin Res. 2005; 11:363-8.
Tsuneyoshi N, Fukudome K, Kohara J, et al. The functional and structural properties of MD-2 required for liposaccharide binding are absent in MD-1. J. Immunol. 2005; 174:340-4.
Nagai Y, Kobayashi T, Motoi Y, et al. The radioprotective 105/MD-1 complex links TLR2 and TLR4/MD-2 in antibody response to microbial membranes. J. Immunol. 2005; 174:7043-9.

Images



Western blot analysis of MD-1 in Daudi cell lysate with MD-1 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of MD-1 in human spleen tissue with MD-1 antibody at 2.5 µg/mL.