

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse MD-1 in direct ELISAs and Western blots. In direct ELISAs, this antibody shows 100% cross-reactivity with recombinant human (rh) MD-1. In Western blots, this antibody does not cross-react with rhMD-1.
Source	Monoclonal Rat IgG _{2B} Clone # 142004
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse MD-1 Asp20-Ser162 Accession # O88188
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

MD-1 is a secreted glycoprotein that was originally identified as a *v-myb*-regulated gene from avian myeloleukemia virus-transformed chicken myeloblasts (1). The mouse homologue of chicken MD-1 (also known as lymphocyte antigen 86) was subsequently discovered as a molecule that is associated with RP105, a type I transmembrane glycoprotein with extracellular leucine-rich repeats (LRR) typically found in Toll-like receptor (TLR) family members. However, RP105 has a short cytoplasmic tail and lacks the Toll-IL-1 R (TIR) domain that defines the IL-1 R/TLR superfamily (2 - 4). RP105 plays an important role in B-cell activation by bacterial lipopolysaccharide (LPS). It is expressed primarily on mature B cells, dendritic cells and macrophages (4). Mouse MD-1 cDNA encodes a 162 amino acid (aa) residue precursor protein with a putative 19 aa signal peptide and two potential N-linked glycosylation sites. It shares 40% and 66% aa sequence identity with chicken and human MD-1 respectively (2, 3). MD-1 is mainly expressed in spleen, and also detectable in liver, brain, thymus, and kidney. MD-1 is required for efficient RP105 cell surface expression and function (2 - 5). Cell surface RP105/MD-1 complex, in conjunction with TLR4, mediates the innate immune response to LPS in B-cells. Activation of the RP105 complex has been shown to protect against apoptosis, induce B-cell proliferation and upregulate B7.2, a co-stimulatory molecule (5, 6). Since MD-1 is also expressed in liver and brain where RP105 is absent, it has been speculated that MD-1 can also be associated with other LRR-containing molecules, or have additional functions outside the immune system (6).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.