

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MD-2 in direct ELISAs and Western blots. In these formats, less than 1% cross-reactivity with recombinant human MD-1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human MD-2 Glu17-Asn160 Accession # NP_001123946
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 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-2, also known as lymphocyte antigen 96 and ESOP-1, is a secreted glycoprotein that shares conserved cysteine residues and significant sequence similarity (23%) with MD-1. The gene of human MD-2 encodes a 160 amino acid residue (aa) precursor protein with a 16 aa signal peptide and a 144 aa mature protein, which contains 2 N-glycosylation sites (1). Recombinant secreted MD-2 has been found to exist as disulfide-linked dimers and oligomers (2).

Both MD-1 and MD-2 are accessory molecules that associate with the extracellular leucine-rich repeats (LRR) of Toll-like receptor (TLR) family members, which are type I transmembrane receptors that regulate innate immune responses to microbial pathogens (3, 4). MD-1 binds to RP105 on B cells and macrophages to form the signaling receptor complex for lipopolysaccharide (LPS), a constituent of the outer membrane of Gram-negative bacteria. Similarly, MD-2 interacts with TLR-4 to form the heteromeric receptor that confers LPS responsiveness. MD-2 also associates with TLR-2, albeit with less avidity, to confer responsiveness to cell wall components from both Gram-positive and Gram-negative bacteria. MD-1 and MD-2 are also required for the correct targeting of the TLRs to the cell surface. Although MD-2 glycosylation is not crucial for its surface expression and interaction with TLR-4, it is required for LPS binding and signaling (5).

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.