

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 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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

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