

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse TLR2 in direct ELISAs and Western blots. In these formats, approximately 10% cross-reactivity with recombinant human (rh) TLR2 is observed and less than 2% cross-reactivity with recombinant mouse (rm) TLR1, rhTLR3, rmTLR4, and
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse TLR2 Gln25-Leu590 Accession # Q9QUN7
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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

The Toll-like family of molecules are a group of integral membrane proteins that serve as pattern recognition receptors for microbial pathogens (1-4). To date, there are at least eleven mouse and ten human members that activate the innate immune system following exposure to a variety of microbial species (1, 3). All Toll-like receptors (TLRs) are type I transmembrane (TM) proteins that exist either in the plasma membrane or in the membranes of endosomal structures (where they bind intracellular nucleic acids) (3). All TLRs also contain a large number of extracellular leucine-rich repeats (LRRs) and a cytoplasmic tail with a Toll/IL-1 receptor (TIR) domain. Mouse Toll-like receptor-2 (TLR2) is a 97 kDa, 760 amino acid (aa) glycoprotein that contains a 563 aa extracellular region, a 21 aa TM segment, and a 176 aa cytoplasmic domain (5, 6). The extracellular region contains 16 leucine-rich repeats, while the cytoplasmic tail shows one 146 aa TIR domain. The receptor is expressed on a number of cell types including T cells (αβ and γδ), monocytes, dendritic cells, neutrophils, B cells, endothelial cells, mast cells, NK cells, macrophages and hepatocytes (1, 4, 5, 7, 8). TLR2 functions as part of a heterodimeric complex with either TLR1 or TLR6 (1, 3, 4). These complexes recognize lipoproteins and glycolipids from gram-positive and gram-negative bacteria as well as mycoplasma and yeast. TLR2/TLR1 heterodimers recognize triacylated lipopeptides from a variety of microorganisms. The TLR2/TLR6 heterodimer preferentially recognizes diacylated lipopeptides (9). Biglycan is also known to activate TLR2, but the context is unclear (8). Notably, in human, TLR2 also dimerizes with TLR10. But the TLR10 gene in mouse (but not rat) is mutationally inactive, and thus this complex is nonfunctional (10). Upon ligand recognition, TLR2 delivers an activating signal via the associated adapter molecules, MyD88 and TIRAP (1, 11). Activation via TLR2 also results in production of a number of pro-inflammatory cytokines including TNF-α, IL-2, IL-6, IL-12, and MIP-2 (1, 3). The extracellular region of mouse TLR2 is 89%, 67%, 81%, and 65% aa identical to the equivalent region in rat, human, hamster and canine, respectively.

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.