Mouse TLR2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1530

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 rmTLR6 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse TLR2 Gln25-Leu590 Accession # Q9QUN7
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

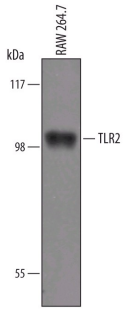
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below

DATA

Western Blot



Detection of Mouse TLR2 by Western Blot. Western blot shows lysates of RAW 264.7 mouse monocyte/macrophage cell line. PVDF Membrane was probed with 1 µg/mL of Goat Anti-Mouse TLR2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1530) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for TLR2 at approximately 100 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month from date of receipt, 2 to 8 °C, reconstituted. ● 6 months from date of receipt, -20 to -70 °C, reconstituted.

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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.

References:

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