

#### DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse TLR3 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant human TLR3 is observed, 5% cross-reactivity with recombinant mouse (rm) TLR4 is observed, and less than 1% cross-reactivity with rmTLR2 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse TLR3 (R&D Systems, Catalog # 3005-TR) Cys29-Leu705 Accession # Q99MB1
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

#### 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
<b>Western Blot</b>	0.1 µg/mL	Recombinant Mouse TLR3 (Catalog # 3005-TR)

#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### BACKGROUND

Mouse TLR3 is a 116 kDa type I transmembrane glycoprotein that belongs to the mammalian Toll-Like Receptor family of pathogen pattern recognition molecules (1, 2). There are at least eleven mouse and ten human members that activate the innate immune system following exposure to a variety of microbial species (3). The mouse TLR3 cDNA encodes a 905 amino acid (aa) precursor that contains a 25 aa signal sequence, a 680 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 179 aa cytoplasmic region (4). The horseshoe shaped ECD (5, 6) contains 23 leucine-rich repeats, and the cytoplasmic domain contains one Toll/IL-1 receptor (TIR) domain. The ECD of mouse TLR3 shares 90%, 79%, and 77% aa sequence identity with the ECD of rat, human, and bovine TLR3, respectively. TLR3 is found in phagosomes (7), where the acidic pH enables binding of internalized double stranded RNA and mRNA from viruses, parasites, and necrotic virally-infected cells (8 - 11). Ligand binding by TLR3 induces receptor dimerization (5, 6, 8), leading to the release of inflammatory cytokines and dendritic cell maturation (9, 11 - 13). Mouse TLR3 is expressed in dendritic cells, macrophages, microglia, and astrocytes (13 - 15), and is upregulated by IFN-β and LPS (9, 14). TLR3 expression is also induced on lung fibroblasts and epithelial cells by respiratory syncytial virus infection (12).

#### References:

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