Mouse TLR3 PE-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 313129

Catalog Number: IC3005P

100 TESTS

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse TLR3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse TLR1, 2, 4, 6, recombinant human TLR3 or 4 is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 313129
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse TLR3 Cys29-Leu705 Accession # Q99MB1
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

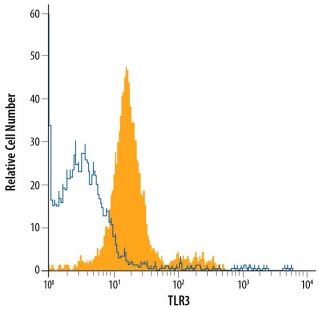
APPLICATIONS

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.*

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Intracellular Staining by Flow Cytometry



Detection of TLR3 in Mouse Splenocytes by Flow Cytometry. Mouse splenocytes were stained with Rat Anti-Mouse TLR3 PE-conjugated Monoclonal Antibody (Catalog # IC3005P, filled histogram) or isotype control antibody (Catalog # IC006P, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

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.

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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 up-regulated 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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