Human TLR3 Antibody

Monoclonal Mouse IgG_{2B} Clone # 512505

Catalog Number: MAB1487

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TLR3 in Western blots.
Source	Monoclonal Mouse IgG_{2B} Clone # 512505
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	NS0 mouse myeloma cell line transfected with human TLR3 Lys27-Ser711 Accession # Q6PCD4
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

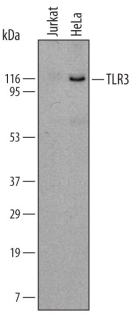
APPLICATIONS

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
Western Blot	2 µg/mL	See Below

DATA

Western Blot



Detection of Human TLR3 by Western Blot. Western blot shows lysates of Jurkat human acute T cell leukemia cell line and HeLa human cervical epithelial carcinoma cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human TLR3 Monoclonal Antibody (Catalog # MAB1487) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for TLR3 at approximately 116 kDa (as indicated). This experiment was conducted under non-reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	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
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, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Human 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 human TLR3 cDNA encodes a 904 amino acid (aa) precursor that contains a 23 aa signal sequence, a 681 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 human TLR3 shares 80%, 79%, and 77% aa sequence identity with the ECD of rat, mouse, 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). 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 by lung fibroblasts and epithelial cells by respiratory syncytial virus infection (12).

References:

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