

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
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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

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).

PRODUCT SPECIFIC NOTICES

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