10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TLR3 Recombinant Rabbit mAb

Catalog # AP99166

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	O15455
Other Accession	O15455
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	103829
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human TLR3
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the Toll-like receptor family.Contains 22 LRR (leucine-rich) repeats.Contains 1 LRRCT domain.Contains 1 LRRNT domain.Contains 1 TIR domain.
SUBUNIT	Interacts with MYD88 via their respective TIR domains. Interacts (via transmembrane domain) with UNC93B1. Interacts with TICAM1. Homodimer formation is triggered by ligand binding and is required for TLR3 signaling. Binding of double-stranded RNA is required for the interaction with SRC.
Post-translational modifications	Heavily N-glycosylated, except on that part of the surface of the ectodomain that is involved in ligand binding.
DISEASE	Defects in TLR3 are associated with herpes simplex encephalitis type 2 (HSE2) [MIM:613002]. HSE is a rare complication of human herpesvirus 1 (HHV-1) infection, occurring in only a small minority of HHV-1 infected individuals. HSE is characterized by hemorrhagic necrosis of parts of the temporal and frontal lobes. Onset is over several days and involves fever, headache, seizures, stupor, and often coma, frequently with a fatal outcome. Note=TLR3 mutations predispose otherwise healthy individuals to isolated herpes simplex encephalitis through a mechanism that involves impaired IFNs production and reduced immune defense against viral infection in the central nervous system.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene is a member of the Toll-like receptor (TLR) family which plays a fundamental role in pathogen recognition and activation of innate immunity. TLRs are highly conserved from Drosophila to humans and share structural and functional similarities. They recognize pathogen-associated molecular patterns (PAMPs) that are expressed on infectious agents, and mediate the production of cytokines necessary for the development of effective immunity. The various TLRs exhibit different patterns of expression. This receptor is most abundantly expressed in placenta and pancreas, and is restricted to the dendritic subpopulation of the leukocytes. It recognizes dsRNA associated with viral infection, and induces the activation of NF-kappaB and the production of type I interferons. It may thus play a role in host defense against viruses. Use of alternative

polyadenylation sites to generate different length transcripts has been noted for this gene.

Additional Information

Gene ID	7098
Other Names	CD283; IIAE2; IMD83; TLR3_HUMAN; TLR3; TLR3_MOUSE; toll like receptor 3; toll-like receptor 3
Dilution	WB=1;1000-5000,IHC-P=1:50-200,IF=1:50-200,ELISA=1:5000-10000,IHC-F=1:50-200
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	TLR3 (HGNC:11849)
Function	Key component of innate and adaptive immunity. TLRs (Toll- like receptors) control host immune response against pathogens through recognition of molecular patterns specific to microorganisms. TLR3 is a nucleotide-sensing TLR which is activated by double-stranded RNA, a sign of viral infection. Acts via the adapter TRIF/TICAM1, leading to NF-kappa-B activation, IRF3 nuclear translocation, cytokine secretion and the inflammatory response.
Cellular Location	Endoplasmic reticulum membrane; Single-pass type I membrane protein. Endosome membrane. Early endosome
Tissue Location	Expressed at high level in placenta and pancreas. Also detected in CD11c+ immature dendritic cells. Only expressed in dendritic cells and not in other leukocytes, including monocyte precursors. TLR3 is the TLR that is expressed most strongly in the brain, especially in astrocytes, glia, and neurons

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