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TLR3 Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1503e

Product Information

Application	WB, IHC-P, E
Primary Accession	O15455
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	103829

Additional Information

Gene ID	7098
Other Names	Toll-like receptor 3, CD283, TLR3
Target/Specificity	This TLR3 antibody is generated from rabbits immunized with TLR3 recombinant protein.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TLR3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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

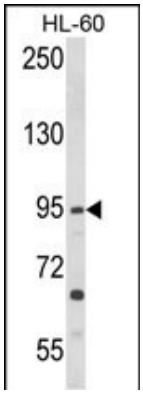
Background

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.

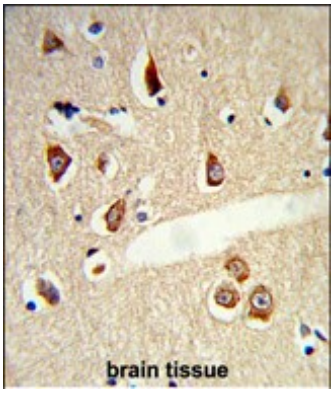
References

Heinz, S., et al., J. Biol. Chem. 278(24):21502-21509 (2003).
Sarkar, S.N., et al., J. Biol. Chem. 278(7):4393-4396 (2003).
Matsumoto, M., et al., Biochem. Biophys. Res. Commun. 293(5):1364-1369 (2002).
Takami, M., et al., J. Immunol. 169(3):1516-1523 (2002).
Kadowaki, N., et al., J. Exp. Med. 194(6):863-869 (2001).

Images



Western blot analysis of TLR3 Antibody (Cat. #AP1503e) in HL-60 cell line lysates (35ug/lane). TLR3 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded mouse brain tissue reacted with TLR3 Antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- Lipopolysaccharide (LPS) Promotes Apoptosis in Human Breast Epithelial × Breast Cancer Hybrids, but Not in Parental Cells.
- Migration ability and Toll-like receptor expression of human mesenchymal stem cells improves significantly after three-dimensional culture.
- Cytokine release of human NK cells solely triggered with Poly I:C.

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