

TLR7 Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1507b**Specification**

TLR7 Antibody (N-term) - Product Information

Application	IHC-P, WB,E
Primary Accession	Q9NYK1
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	120922
Antigen Region	98-128

TLR7 Antibody (N-term) - Additional Information**Gene ID** 51284**Other Names**

Toll-like receptor 7, TLR7

Target/Specificity

This TLR7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 98-128 amino acids from the N-terminal region of human TLR7.

Dilution

IHC-P~~1:50~100

WB~~1:1000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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

TLR7 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

TLR7 Antibody (N-term) - Protein Information**Name** TLR7 ([HGNC:15631](#))**Function** Endosomal receptor that plays a key role in innate and adaptive immunity

(PubMed:[14976261](#), PubMed:[32433612](#)). Controls host immune response against pathogens through recognition of uridine- containing single strand RNAs (ssRNAs) of viral origin or guanosine analogs (PubMed:[12738885](#), PubMed:[27742543](#), PubMed:[31608988](#), PubMed:[32706371](#), PubMed:[35477763](#)). Upon binding to agonists, undergoes dimerization that brings TIR domains from the two molecules into direct contact, leading to the recruitment of TIR-containing downstream adapter MYD88 through homotypic interaction (PubMed:[27742543](#)). In turn, the Myddosome signaling complex is formed involving IRAK4, IRAK1, TRAF6, TRAF3 leading to activation of downstream transcription factors NF-kappa-B and IRF7 to induce pro-inflammatory cytokines and interferons, respectively (PubMed:[27742543](#), PubMed:[32706371](#)). In plasmacytoid dendritic cells, RNASET2 endonuclease cooperates with PLD3 or PLD4 5'->3' exonucleases to process RNA and release 2',3'-cyclic guanosine monophosphate (2',3'-cGMP) and cytidine-rich RNA fragments that occupy TLR7 ligand-binding pockets and trigger a signaling- competent state.

Cellular Location

Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P58681}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P58681}. Endosome {ECO:0000250|UniProtKB:P58681}. Lysosome {ECO:0000250|UniProtKB:P58681}. Cytoplasmic vesicle, phagosome {ECO:0000250|UniProtKB:P58681}. Note=Relocalizes from endoplasmic reticulum to endosome and lysosome upon stimulation with agonist {ECO:0000250|UniProtKB:P58681}

Tissue Location

Detected in brain, placenta, spleen, stomach, small intestine, lung and in plasmacytoid pre-dendritic cells. Expressed in peripheral mononuclear blood cells (PubMed:[32706371](#))

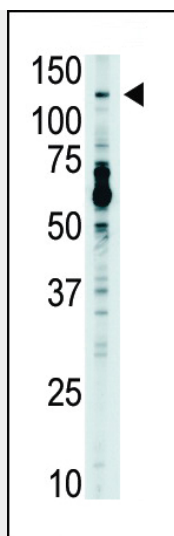
TLR7 Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

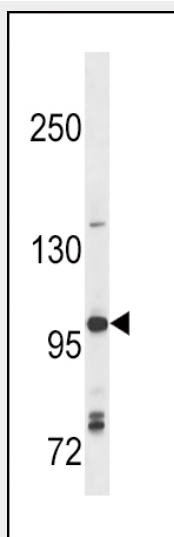
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

TLR7 Antibody (N-term) - Images

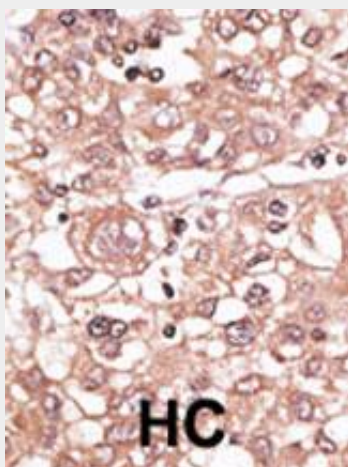




The anti-TLR7 Pab (Cat. #AP1507b) is used in Western blot to detect TLR7 in mouse liver tissue lysate.



TLR7 Antibody (C112) (Cat. #AP1507b) western blot analysis in Ramos cell line lysates (35ug/lane). This demonstrates the TLR7 antibody detected the TLR7 protein (arrow).



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody,

which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

TLR7 Antibody (N-term) - 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. TLR7 is predominantly expressed in lung, placenta, and spleen, and lies in close proximity to another family member, TLR8, on chromosome X.

TLR7 Antibody (N-term) - References

- Clark, H.F., et al., *Genome Res.* 13(10):2265-2270 (2003).
- Ito, T., et al., *J. Exp. Med.* 195(11):1507-1512 (2002).
- Du, X., et al., *Eur. Cytokine Netw.* 11(3):362-371 (2000).
- Chuang, T.H., et al., *Eur. Cytokine Netw.* 11(3):372-378 (2000).
- Rock, F.L., et al., *Proc. Natl. Acad. Sci. U.S.A.* 95(2):588-593 (1998).