

TLR7 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP1507b**Specification**

TLR7 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [Q9NYK1](#)**TLR7 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 51284**Other Names**

Toll-like receptor 7, TLR7

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP1507b](/product/products/AP1507b) was selected from the N-term region of human Human TLR7 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

TLR7 Antibody (N-term) Blocking Peptide - Protein Information**Name** TLR7 ([HGNC:15631](#))**Function**

Endosomal receptor that plays a key role in innate and adaptive immunity (PubMed: [14976261](http://www.uniprot.org/citations/14976261), PubMed: [32433612](http://www.uniprot.org/citations/32433612)). Controls host immune response against pathogens through recognition of uridine- containing single strand RNAs (ssRNAs) of viral origin or guanosine analogs (PubMed: [31608988](http://www.uniprot.org/citations/31608988), PubMed: [27742543](http://www.uniprot.org/citations/27742543), PubMed: [12738885](http://www.uniprot.org/citations/12738885), PubMed: [32706371](http://www.uniprot.org/citations/32706371), PubMed: [35477763](http://www.uniprot.org/citations/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).

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) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

TLR7 Antibody (N-term) Blocking Peptide - Images

TLR7 Antibody (N-term) Blocking Peptide - 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) Blocking Peptide - 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).