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

TLR7 Antibody (C-term) Blocking peptide

Synthetic peptide
Catalog # BP13712b

Specification

TLR7 Antibody (C-term) Blocking peptide - Product Information

Primary Accession Q9NYK1

TLR7 Antibody (C-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 AP13712b was selected from the C-term region of 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 (C-term) Blocking peptide - 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:31608988, PubMed:27742543, PubMed:12738885, 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:<a href="http://www.uniprot.org/citations/27742543"

target="_blank">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 (C-term) Blocking peptide - Protocols

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

- Blocking Peptides

TLR7 Antibody (C-term) Blocking peptide - Images

TLR7 Antibody (C-term) Blocking peptide - Background

The protein encoded by this gene is a member of theToll-like receptor (TLR) family which plays a fundamental role inpathogen recognition and activation of innate immunity. TLRs arehighly conserved from Drosophila to humans and share structural andfunctional similarities. They recognize pathogen-associatedmolecular patterns (PAMPs) that are expressed on infectious agents,and mediate the production of cytokines necessary for thedevelopment of effective immunity. The various TLRs exhibitdifferent patterns of expression. This gene is predominantlyexpressed in lung, placenta, and spleen, and lies in closeproximity to another family member, TLR8, on chromosome X.

TLR7 Antibody (C-term) Blocking peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Manuse, M.J., et al. Virology 405(2):383-389(2010)Cros, J., et al. Immunity 33(3):375-386(2010)Shen, N., et al. Proc. Natl. Acad. Sci. U.S.A. 107(36):15838-15843(2010)Enevold, C., et al. Mult. Scler. 16(8):942-949(2010)