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TLR9 Antibody (C-term) Blocking peptide

Synthetic peptide
Catalog # BP13721b

Specification

TLR9 Antibody (C-term) Blocking peptide - Product Information

Primary Accession Q9NR96

TLR9 Antibody (C-term) Blocking peptide - Additional Information

Gene ID 54106

Other Names
Toll-like receptor 9, CD289, TLR9

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP13721b was selected from the C-term region of TLR9. 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.

TLR9 Antibody (C-term) Blocking peptide - Protein Information

Name TLR9

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. TLR9 is a nucleotide-sensing TLR which is activated by unmethylated cytidine-phosphate-guanosine (CpG) dinucleotides (PubMed:14716310). Acts via MYD88 and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response (PubMed:11564765, PubMed:17932028). Controls lymphocyte response to Helicobacter infection (By similarity). Upon CpG stimulation, induces B-cell proliferation, activation, survival and antibody production (PubMed:23857366).

Cellular Location
Endoplasmic reticulum membrane; Single-pass type I membrane protein {ECO:0000250|UniProtKB:Q9EQU3}. Early endosome membrane. Lysosome {ECO:0000250|UniProtKB:Q9EQU3} Cytoplasmic vesicle, phagosome {ECO:0000250|UniProtKB:Q9EQU3}. Golgi apparatus membrane. Note=Relocalizes from endoplasmic reticulum to endosome and lysosome upon stimulation with agonist. Exit from the ER requires UNC93B1. Endolysosomal localization is required for proteolytic cleavage and subsequent activation Intracellular localization of the active receptor may prevent from responding to self nucleic acid. {ECO:0000250|UniProtKB:Q9EQU3, ECO:0000269|PubMed:14716310, ECO:0000269|PubMed:38169466}

Tissue Location
Highly expressed in spleen, lymph node, tonsil and peripheral blood leukocytes, especially in plasmacytoid pre-dendritic cells. Levels are much lower in monocytes and CD11c+ immature dendritic cells. Also detected in lung and liver

TLR9 Antibody (C-term) Blocking peptide - Protocols

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

- Blocking Peptides

TLR9 Antibody (C-term) Blocking peptide - Images

TLR9 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 preferentiallyexpressed in immune cell rich tissues, such as spleen, lymph node,bone marrow and peripheral blood leukocytes. Studies in mice andhuman indicate that this receptor mediates cellular response tounmethylated CpG dinucleotides in bacterial DNA to mount an innateimmune response.

TLR9 Antibody (C-term) Blocking peptide - References

Engin, A., et al. Microbes Infect. 12 (12-13), 1071-1078 (2010) :Romero, R., et al. Am. J. Obstet. Gynecol. 203 (4), 361 (2010) :Veltkamp, M., et al. Clin. Exp. Immunol. 162(1):68-74(2010)Fiola, S., et al. J. Immunol. 185(6):3620-3631(2010)Selvaraj, P., et al. Tuberculosis (Edinb) 90(5):306-310(2010)