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TLR4 Blocking Peptide
Catalog # PBV10104b

Specification

TLR4 Blocking Peptide - Product Information

Primary Accession	Q9QX05
Other Accession	EDM10505.1
Gene ID	29260
Calculated MW	96072

TLR4 Blocking Peptide - Additional Information

Gene ID 29260

Application & Usage	**The peptide is used for blocking the antibody activity of TLR4. It usually blocks the antibody activity completely in Western blot analysis by incubating the peptide with equal volume of antibody for 30-60 minutes at 37°C.**

Other Names
Toll-like receptor 4, Toll4, CD284, Tlr4

Target/Specificity
TLR4

Formulation
50 µg (0.5 mg/ml) in phosphate buffered saline (PBS), pH 7.2, containing 50% glycerol, 1% BSA and 0.02% thimerosal.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
TLR4 Blocking Peptide is for research use only and not for use in diagnostic or therapeutic procedures.

TLR4 Blocking Peptide - Protein Information

Name Tlr4

Function
Transmembrane receptor that functions as a pattern recognition receptor recognizing pathogen- and damage-associated molecular patterns (PAMPs and DAMPs) to induce innate immune responses via downstream signaling pathways. At the plasma membrane, cooperates with LY96 to

mediate the innate immune response to bacterial lipopolysaccharide (LPS). Also involved in LPS-independent inflammatory responses triggered by free fatty acids, such as palmitate, and Ni(2+). Mechanistically, acts via MYD88, TIRAP and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response. Alternatively, CD14-mediated TLR4 internalization via endocytosis is associated with the initiation of a MYD88-independent signaling via the TICAM1-TBK1-IRF3 axis leading to type I interferon production. In addition to the secretion of proinflammatory cytokines, initiates the activation of NLRP3 inflammasome and formation of a positive feedback loop between autophagy and NF-kappa-B signaling cascade. In complex with TLR6, promotes inflammation in monocytes/macrophages by associating with TLR6 and the receptor CD86. Upon ligand binding, such as oxLDL or amyloid-beta 42, the TLR4:TLR6 complex is internalized and triggers inflammatory response, leading to NF-kappa-B-dependent production of CXCL1, CXCL2 and CCL9 cytokines, via MYD88 signaling pathway, and CCL5 cytokine, via TICAM1 signaling pathway. In myeloid dendritic cells, vesicular stomatitis virus glycoprotein G but not LPS promotes the activation of IRF7, leading to type I IFN production in a CD14-dependent manner.

Cellular Location
Cell membrane {ECO:0000250|UniProtKB:O00206}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:O00206} Early endosome {ECO:0000250|UniProtKB:O00206}. Cell projection, ruffle {ECO:0000250|UniProtKB:Q9QUK6}. Note=Upon complex formation with CD36 and TLR6, internalized through dynamin-dependent endocytosis Colocalizes with RFTN1 at cell membrane and then together with RFTN1 moves to endosomes, upon lipopolysaccharide stimulation {ECO:0000250|UniProtKB:O00206}

TLR4 Blocking Peptide - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TLR4 Blocking Peptide - Images