

TLR4 Antibody
Purified Rabbit Polyclonal Antibody
Catalog # ABV11523**Specification**

TLR4 Antibody - Product Information

Application	WB
Primary Accession	O00206
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	95680

TLR4 Antibody - Additional Information**Gene ID** 7099**Other Names**

ARMD10, CD284, TOLL, hToll, Toll-like receptor 4

Target/Specificity

TLR4

Formulation

100 µg (0.2 mg/ml) Protein A affinity purified rabbit anti-TLR4 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 50% glycerol, 1% BSA, 0.02% thimerosal.

Handling

The antibody solution should be gently mixed before use.

Background Descriptions**Precautions**

TLR4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TLR4 Antibody - 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 (PubMed:16622205, PubMed:10835634, PubMed:15809303, PubMed:15809303).

[17478729](http://www.uniprot.org/citations/17478729), PubMed:[20037584](http://www.uniprot.org/citations/20037584), PubMed:[20711192](http://www.uniprot.org/citations/20711192), PubMed:[23880187](http://www.uniprot.org/citations/23880187), PubMed:[27022195](http://www.uniprot.org/citations/27022195), PubMed:[17292937](http://www.uniprot.org/citations/17292937), PubMed:[29038465](http://www.uniprot.org/citations/29038465)). At the plasma membrane, cooperates with LY96 to mediate the innate immune response to bacterial lipopolysaccharide (LPS) (PubMed:[27022195](http://www.uniprot.org/citations/27022195)). Also involved in LPS-independent inflammatory responses triggered by free fatty acids, such as palmitate, and Ni(2+) (PubMed:[20711192](http://www.uniprot.org/citations/20711192)). Mechanistically, acts via MYD88, TIRAP and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response (PubMed:[9237759](http://www.uniprot.org/citations/9237759), PubMed:[10835634](http://www.uniprot.org/citations/10835634), PubMed:[27022195](http://www.uniprot.org/citations/27022195), PubMed:[21393102](http://www.uniprot.org/citations/21393102)). 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 (PubMed:[14517278](http://www.uniprot.org/citations/14517278)). 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 (PubMed:[32894580](http://www.uniprot.org/citations/32894580)). In complex with TLR6, promotes inflammation in monocytes/macrophages by associating with TLR6 and the receptor CD86 (PubMed:[23880187](http://www.uniprot.org/citations/23880187)). 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 (PubMed:[23880187](http://www.uniprot.org/citations/23880187)). 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 (PubMed:[23880187](http://www.uniprot.org/citations/23880187), PubMed:[15265881](http://www.uniprot.org/citations/15265881)). Required for the migration-promoting effects of ZG16B/PAUF on pancreatic cancer cells.

Cellular Location

Cell membrane; Single-pass type I membrane protein. Early endosome. Cell projection, ruffle {ECO:0000250|UniProtKB:Q9QUK6}. Note=Upon complex formation with CD36 and TLR6, internalized through dynamin-dependent endocytosis (PubMed:20037584). Colocalizes with RFTN1 at cell membrane and then together with RFTN1 moves to endosomes, upon lipopolysaccharide stimulation. Co-localizes with ZG16B/PAUF at the cell membrane of pancreatic cancer cells (PubMed:36232715)

Tissue Location

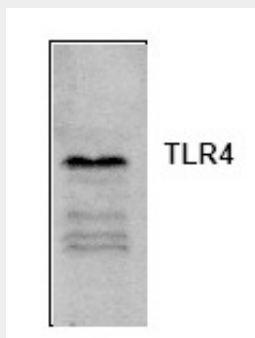
Highly expressed in placenta, spleen and peripheral blood leukocytes (PubMed:9435236, PubMed:9237759). Detected in monocytes, macrophages, dendritic cells and several types of T-cells (PubMed:9237759, PubMed:27022195). Expressed in pancreatic cancer cells but not in normal pancreatic cells (at protein level) (PubMed:36232715).

TLR4 Antibody - 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](#)

TLR4 Antibody - Images



Western blot analysis of TLR4 in transfected HRK293 cells.

TLR4 Antibody - Background

TLR4 (Toll-like receptor 4) is a mammalian homologue of the *Drosophila* toll protein. The human TLR4 is a type-1 transmembrane protein containing 799 amino acid residues. The extracellular domain has leucine-rich repeats and the intracellular domain is similar to that of IL-1 receptor. TLR4 is a receptor for lipopolysaccharide (LPS). In mice that are genetically tolerant to endotoxin, mutations have been identified in the intracellular domain of TLR4 that abolish LPS responsiveness. TLR4 uses a mechanism similar to that of the IL-1 receptor for signal transduction that leads to activation of NF- κ B.