

Anti-TLR4 Antibody (aa420-435)

Rabbit Anti Human Polyclonal Antibody

Catalog # ALS17778

Product Information

Application	WB, IHC-P, ICC
Primary Accession	O00206
Predicted	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	95680
Concentration (mg/ml)	1 mg/ml

Additional Information

Gene ID	7099
Alias Symbol	TLR4
Other Names	TLR4, CD284, CD284 antigen, Homolog of Drosophila toll, TLR-4, TOLL, ARMD10, Toll-like receptor 4, HToll
Target/Specificity	Detects ~75-80kD when tested against partial recombinant mouse TLR4 (extracellular portion plus His-tag).
Reconstitution & Storage	Affinity purified
Precautions	Anti-TLR4 Antibody (aa420-435) is for research use only and not for use in diagnostic or therapeutic procedures.

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: 10835634 , PubMed: 15809303 , PubMed: 16622205 , PubMed: 17292937 , PubMed: 17478729 , PubMed: 20037584 , PubMed: 20711192 , PubMed: 23880187 , PubMed: 27022195 , PubMed: 29038465 , PubMed: 17803912 , PubMed: 15852007). At the plasma membrane, cooperates with LY96 to mediate the innate immune response to bacterial lipopolysaccharide (LPS) (PubMed: 27022195). Also involved in LPS-independent inflammatory responses triggered by free fatty acids, such as palmitate, and Ni(2+) (PubMed: 20711192). Mechanistically, acts via MYD88, TIRAP and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response (PubMed: 10835634 , PubMed: 21393102 ,

PubMed:[27022195](#), PubMed:[36945827](#), PubMed:[9237759](#)). 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](#)). 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](#)). In complex with TLR6, promotes inflammation in monocytes/macrophages by associating with TLR6 and the receptor CD86 (PubMed:[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](#)). 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:[15265881](#), PubMed:[23880187](#)). 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:9237759, PubMed:9435236). Detected in monocytes, macrophages, dendritic cells and several types of T-cells (PubMed:27022195, PubMed:9237759). Expressed in pancreatic cancer cells but not in normal pancreatic cells (at protein level) (PubMed:36232715).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.