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

CD284 (Toll-Like Receptor 4) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone TLR4/230]
Catalog # AH12426

Specification

CD284 (Toll-Like Receptor 4) Antibody - With BSA and Azide - Product Information

Application	**IHC, IF, FC**
Primary Accession	O00206
Other Accession	7099, 174312
Reactivity	**Human, Rat, Monkey, Pig, Guinea Pig, Dog**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse / IgG2a, kappa**
Calculated MW	**95-120kDa KDa**

CD284 (Toll-Like Receptor 4) Antibody - With BSA and Azide - Additional Information

Gene ID 7099

Other Names
Toll-like receptor 4, hToll, CD284, TLR4

Application Note
IHC~~1:100~500<br \>IF~~1:50~200<br \>FC~~1:10~50

Storage
Store at 2 to 8°C.Antibody is stable for 24 months.

Precautions
CD284 (Toll-Like Receptor 4) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

CD284 (Toll-Like Receptor 4) Antibody - With BSA and Azide - 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:<a

href="http://www.uniprot.org/citations/23880187" target="_blank">23880187, PubMed:27022195, PubMed:29038465, PubMed:17803912). 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).

CD284 (Toll-Like Receptor 4) Antibody - With BSA and Azide - 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

CD284 (Toll-Like Receptor 4) Antibody - With BSA and Azide - Images

CD284 (Toll-Like Receptor 4) Antibody - With BSA and Azide - Background

This MAb reacts with human Toll-like receptor 2 (TLR4). It is a member of the Toll-like receptor (TLR) family, which plays a fundamental role in pathogen recognition and activation of innate immunity. TLRs are highly conserved from Drosophila to humans and share structural and functional similarities. They recognize pathogen-associated molecular patterns that are expressed on infectious agents, and mediate the production of cytokines necessary for the development of effective immunity. The various TLRs exhibit different patterns of expression. This receptor has been implicated in signal transduction events induced by lipopolysaccharide (LPS) found in most gram-negative bacteria. Mutations in this gene have been associated with differences in LPS responsiveness. Multiple transcript variants encoding different isoforms have been found for this gene.

CD284 (Toll-Like Receptor 4) Antibody - With BSA and Azide - References

Wei, X.Q., et al. 2008. The significance of Toll-like receptor 4 (TLR4) expres- sion in patients with chronic hepatitis B. Clin. Invest. Med. 31: E123-E130

CD284 (Toll-Like Receptor 4) Antibody - With BSA and Azide - Citations

- Protective effect of Dachengqi decoction on the pancreatic microcirculatory system in severe acute pancreatitis by down-regulating HMGB-TLR-4-IL-23-IL-17A mediated neutrophil activation by targeting SIRT1