

TLR4 Mouse mAb

Catalog No: #62260

Package Size: #62260-1 50ul #62260-2 100ul

Description

Product Name	TLR4 Mouse mAb
Host Species	Mouse
Clonality	Monoclonal
Clone No.	MR4526
Isotype	IgG1,Kappa
Purification	Recombinant Expression and Affinity purified
Applications	ELISA,IHC,IF,FC
Species Reactivity	Human
Specificity	This recombinant monoclonal antibody can detects endogenous levels of CD284 protein.
Immunogen Description	Purified recombinant human CD284
Target Name	TLR4
Other Names	TLR4 ;Toll-like receptor 4 ;hToll ;CD antigen CD284
Calculated MW	96kD
SDS-PAGE MW	95kDa
Formulation	Phosphate-buffered solution
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Application Details

ELISA 1:5000-100000 Flow Cyt 1-2 $\times$ 10⁶/Test

Background

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).

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 Ni²⁺ (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

Note: This product is for in vitro research use only and is not intended for use in humans or animals.