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TLR2 Antibody (Clone BV31-9)

Mouse Monoclonal Antibody
Catalog # ABV10419

Specification

TLR2 Antibody (Clone BV31-9) - Product Information

Application	**WB**
Primary Accession	O60603
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**89838**

TLR2 Antibody (Clone BV31-9) - Additional Information

Gene ID 7097

Application & Usage	**Western blotting (1:200-1000 dilution). However, the optimal conditions should be determined individually. Ramos cell lysate can be used as a positive control and a ~86 kDa band is detected.**

Other Names
Toll-like receptor 2 , TLR2 , Anti-TLR2 , CD282 , TIL4

Target/Specificity
TLR2

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µl protein G purified mouse anti-human TLR2 monoclonal 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.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
TLR2 Antibody (Clone BV31-9) is for research use only and not for use in diagnostic or therapeutic

procedures.

TLR2 Antibody (Clone BV31-9) - Protein Information

Name TLR2 (HGNC:11848)

Synonyms TIL4

Function
Cooperates with LY96 to mediate the innate immune response to bacterial lipoproteins and other microbial cell wall components. Cooperates with TLR1 or TLR6 to mediate the innate immune response to bacterial lipoproteins or lipopeptides (PubMed:21078852, PubMed:17889651). Acts via MYD88 and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response. May also activate immune cells and promote apoptosis in response to the lipid moiety of lipoproteins (PubMed:10426995, PubMed:10426996). Recognizes mycoplasmal macrophage-activating lipopeptide-2kD (MALP-2), soluble tuberculosis factor (STF), phenol-soluble modulin (PSM) and B.burgdorferi outer surface protein A lipoprotein (OspA-L) cooperatively with TLR6 (PubMed:11441107). Stimulation of monocytes in vitro with M.tuberculosis PstS1 induces p38 MAPK and ERK1/2 activation primarily via this receptor, but also partially via TLR4 (PubMed:16622205). MAPK activation in response to bacterial peptidoglycan also occurs via this receptor (PubMed:16622205). Acts as a receptor for M.tuberculosis lipoproteins LprA, LprG, LpqH and PstS1, some lipoproteins are dependent on other coreceptors (TLR1, CD14 and/or CD36); the lipoproteins act as agonists to modulate antigen presenting cell functions in response to the pathogen (PubMed:19362712). M.tuberculosis HSP70 (dnaK) but not HSP65 (groEL-2) acts via this protein to stimulate NF-kappa-B expression (PubMed:15809303). Recognizes M.tuberculosis major T-antigen EsxA (ESAT-6) which inhibits downstream MYD88-dependent signaling (shown in mouse) (By similarity). Forms activation clusters composed of several receptors depending on the ligand, these clusters trigger signaling from the cell surface and subsequently are targeted to the Golgi in a lipid-raft dependent pathway. Forms the cluster TLR2:TLR6:CD14:CD36 in response to diacylated lipopeptides and TLR2:TLR1:CD14 in response to triacylated lipopeptides (PubMed:16880211). Required for normal uptake of M.tuberculosis, a process that is inhibited by M.tuberculosis LppM (By similarity).

Cellular Location
Membrane {ECO:0000250|UniProtKB:Q9QUN7}; Single- pass type I membrane protein. Cytoplasmic vesicle, phagosome membrane {ECO:0000250|UniProtKB:Q9QUN7}; Single-pass type I membrane protein. Membrane raft. Note=Does not reside in lipid rafts before stimulation but accumulates increasingly in the raft upon the presence of the microbial ligand. In response to diacylated lipoproteins, TLR2:TLR6 heterodimers are recruited in lipid rafts, this recruitment determines the intracellular targeting to the Golgi apparatus. Triacylated lipoproteins induce the same mechanism for TLR2:TLR1 heterodimers.

Tissue Location
Highly expressed in peripheral blood leukocytes, in particular in monocytes, in bone marrow, lymph node and in spleen. Also detected in lung and in fetal liver. Levels are low in other tissues

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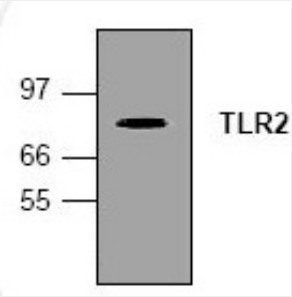
TLR2 Antibody (Clone BV31-9) - Protocols

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

TLR2 Antibody (Clone BV31-9) - Images



Western blot analysis of TLR2 in Ramos cell lysate.

TLR2 Antibody (Clone BV31-9) - Background

The Toll-like receptor (TLR) family in mammalian comprises a family of transmembrane proteins characterized by multiple copies of leucine rich repeats in the extracellular domain and IL-1 receptor motif in the cytoplasmic domain. Up-to-date, ten TLRs (TLR1-10) have been described. TLR2 is differentially expressed in human cells. CD14+ monocytes expressed the highest level of TLR2 followed by CD15+ granulocytes, and CD19+ B-cells. CD3+ T-cells and CD56+ NK cells did not express TLR2. The expression of TLR2 on different cell types are regulated by different immune response modifiers. For example, LPS, GM-CSF, IL-1, and IL-10 up regulate TLR2, whereas IL-4, IFN-gamma, and TNF down regulate TLR2 expression in monocytes.