abcam

ab9100

Anti-TLR2 antibody [TL2.1]

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human TLR2. Database link O60603
Clone number	TL2.1
Purification technique	Affinity purification Protein G
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	0.2 µm filtered

Reactivity data

IP

Expected

Species	Common marmoset, Cynomolgus monkey, Rhesus monkey, Human, Dog
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	2-3 µg for 10^5 Cells
Notes	Untreated and 0.4 % formaldehyde fixed cells can be used; do not permeabilize the cells. ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

Expected

Species	Rhesus monkey, Dog, Cynomolgus monkey, Common marmoset
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human
Dilution info	1/50
Notes	Abcam recommends using non-reducing conditions.

Expected

Species	Rhesus monkey, Dog, Cynomolgus monkey, Common marmoset
Dilution info	Use at an assay dependent concentration.
Notes	-

FuncS

Expected

Species	Common marmoset, Cynomolgus monkey, Rhesus monkey, Human, Dog
Dilution info	Use at an assay dependent concentration.
Notes	-

FuncS (Neut/Block)

Expected

Species	Common marmoset
Dilution info	-
Notes	See Lien et al.

Species	Cynomolgus monkey
Dilution info	-
Notes	See Lien et al.

Species	Rhesus monkey
Dilution info	-
Notes	See Lien et al.

Species	Human
Dilution info	-
Notes	See Lien et al.

Species	Dog
Dilution info	-
Notes	See Lien et al.

ICC/IF

Expected

Species	Common marmoset
Dilution info	-
Notes	Fix with PBS/2% formalin for 15 min at 4 degree C; permeabilize with acetone, 10 min, -20 degree C (see Flo et al J Leukoc Biol which used a conjugated form of the antibody).

Species	Cynomolgus monkey
Dilution info	-
Notes	Fix with PBS/2% formalin for 15 min at 4 degree C; permeabilize with acetone, 10 min, -20 degree C (see Flo et al J Leukoc Biol which used a conjugated form of the

antibody).

Species	Rhesus monkey
Dilution info	-
Notes	Fix with PBS/2% formalin for 15 min at 4 degree C; permeabilize with acetone, 10 min, -20 degree C (see Flo et al J Leukoc Biol which used a conjugated form of the antibody).

Species	Human
Dilution info	-
Notes	Fix with PBS/2% formalin for 15 min at 4 degree C; permeabilize with acetone, 10 min, -20 degree C (see Flo et al J Leukoc Biol which used a conjugated form of the antibody).

Species	Dog
Dilution info	-
Notes	Fix with PBS/2% formalin for 15 min at 4 degree C; permeabilize with acetone, 10 min, -20 degree C (see Flo et al J Leukoc Biol which used a conjugated form of the antibody).

Target data

See full target information TLR2

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:17889651, PubMed:21078852). 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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

ab9100 is a TLR2 function blocking antibody that is useful for studies on the role of TLR2 as a pattern recognition receptor in microbial products induced cytokine production by TLR2 bearing cells such as human pheriperal blood mononuclear cells.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Toll-like receptor 2 (TLR2) also called CD282 is a protein that detects molecules from bacteria and fungi. It has a mass of about 90 kDa. TLR2 is expressed on the surface of immune cells such as monocytes macrophages and neutrophils. This receptor recognizes pathogen-associated molecular patterns (PAMPs) and activates the immune response.
Biological function summary	TLR2 initiates signaling pathways that lead to the production of cytokines and chemokines helping to control infection. It forms dimers with other TLRs like TLR1 or TLR6 to expand its recognition range of microbial components. TLR2's activity is important for balancing pathogen recognition and avoiding overactive immune response. On macrophages TLR2 activation enhances their phagocytic ability.
Pathways	TLR2 plays roles in innate immune signaling pathways and inflammation pathways. It contributes significantly to the NF-kB and MAPK pathways which regulate inflammation and immune response. TLR2 often cooperates with proteins like MyD88 and TRAF6 in these pathways leading to downstream activation of transcription factors and production of pro-inflammatory molecules.

Associated diseases and disorders	TLR2 is associated with inflammatory and infectious diseases including sepsis and tuberculosis. During tuberculosis interactions between TLR2 and its ligands trigger immune responses that are important for bacterial control. Additionally TLR2's overactivation links to sepsis by causing excessive inflammation. Researchers study TLR2 for potential therapeutic targeting in these diseases assessing how modulation can improve outcomes or reduce detrimental inflammation.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

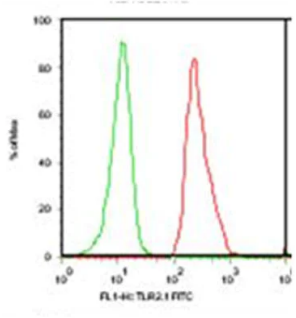
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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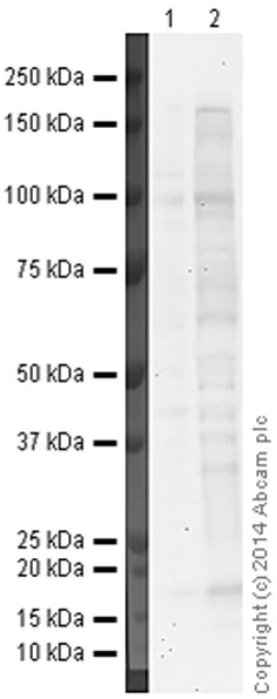
2 product images



Flow Cytometry - Anti-TLR2 antibody [TL2.1] (ab9100)

TLR2 Flow Cytometry staining using mouse Anti-TLR2 antibody

TLR2 staining on human peripheral blood mononuclear cells by using ab9100. Green: CD3+-cells; Red: CD14+ cells



Western blot - Anti-TLR2 antibody [TL2.1] (ab9100)

TLR2 Western blot staining using mouse Anti-TLR2 antibody

This blot was produced using a 4-12% Bis-Tris gel under the MOPS buffer system. The gel was ran at 200V for 60 minutes before being transferred onto a nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked with 2% BSA for 60 minutes before being incubated with ab9100 (anti-TLR2 antibody; 1 ug/mL) for 18 hours at 4°C. Antibody binding was detected using ab97040 (HRP-labelled goat anti-mouse IgG) at 1:50,000 dilutions for 1 hour at room temperature.Visualisation was conducted using ECL development solution ab133406.
This gel was run under reducing conditions resulting in weak signal. We recommend customers to use non-reducing conditions.

All lanes:
Western blot - Anti-TLR2 antibody [TL2.1] (ab9100) at 1 µg/mL

Lane 1:
THP1 at 20 µg

Lane 2:
THP1 + LPS at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Mouse IgG H&L (HRP) preadsorbed (ab97040) at 1/50000 dilution

Performed under reducing conditions.

Predicted band size: 89 kDa

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