abcam

ab323788

Alexa Fluor® 647 Anti-TLR2 antibody [EPR27049-3]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR27049-3
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	1/500
Notes	-

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 duration	1-2 weeks
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, Store in the dark

Notes

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@thermofisher.com.

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 TLR2ЎЇs 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

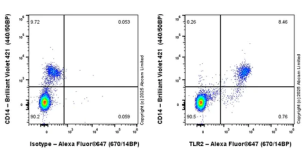
We do not recommend this combination. It is not covered by our product promise.

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.

Full details and terms and conditions can be found here:
Terms & Conditions.

3 product images

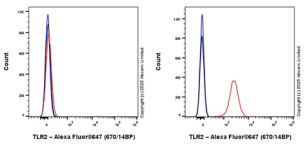


Flow Cytometry - Alexa Fluor® 647 Anti-TLR2 antibody [EPR27049-3] (ab323788)

TLR2 Flow Cytometry staining of Human PBMC (human peripheral blood mononuclear cell) using rabbit Anti-TLR2 antibody

Flow cytometric analysis of Human PBMC (human peripheral blood mononuclear cell) cells labelling TLR2 with ab323788 at 1/500 dilution (0.1ug) / Right compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 647) (ab199093) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Gated on viable cells.
Cells are co-stained with CD14 conjugated to Brilliant Violet 421.

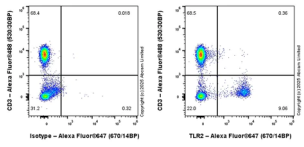


Flow Cytometry - Alexa Fluor® 647 Anti-TLR2 antibody [EPR27049-3] (ab323788)

TLR2 Flow Cytometry staining using rabbit Anti-TLR2 antibody

Flow cytometric analysis of HeLa (human cervical adenocarcinoma epithelial cell, Left) / THP-1 (human monocytic leukemia monocyte, Right) cells labelling TLR2 with ab323788 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 647) (ab199093) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Negative control: HeLa (PMID: 12819075).
Gated on viable cells.



Flow Cytometry - Alexa Fluor® 647 Anti-TLR2 antibody [EPR27049-3] (ab323788)

TLR2 Flow Cytometry staining of Human PBMC (human peripheral blood mononuclear cell) using rabbit Anti-TLR2 antibody

Flow cytometric analysis of Human PBMC (human peripheral blood mononuclear cell) cells labelling TLR2 with ab323788 at 1/500 dilution (0.1ug) / Right compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 647) (ab199093) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Gated on viable cells.
Cells are co-stained with CD3 conjugated to Alexa Fluor®488.

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