abcam

ab300429

Anti-TLR8 antibody [EPR24499-48]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR24499-48
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

WB

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information TLR8

Function	Endosomal receptor that plays a key role in innate and adaptive immunity (PubMed:25297876, PubMed:32433612). Controls host immune response against pathogens through recognition of RNA degradation products specific to microorganisms that are initially processed by RNASET2 (PubMed:31778653). Recognizes GU-rich single-stranded RNA (GU-rich RNA) derived from SARS-CoV-2, SARS-CoV-1 and HIV-1 viruses (PubMed:33718825). Upon binding to agonists, undergoes dimerization that brings TIR domains from the two molecules into direct contact, leading to the recruitment of TIR-containing downstream adapter MYD88 through homotypic interaction (PubMed:23520111, PubMed:25599397, PubMed:26929371, PubMed:33718825). In turn, the Myddosome signaling complex is formed involving IRAK4, IRAK1, TRAF6, TRAF3 leading to activation of downstream transcription factors NF-kappa-B and IRF7 to induce pro-inflammatory cytokines and interferons, respectively (PubMed:16737960, PubMed:17932028, PubMed:29155428).

Storage

Shipped at conditions	Conditional Ambient
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

Notes

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.

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.

Supplementary info

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

Activity summary	TLR8 also known as Toll-like receptor 8 is a member of the Toll-like receptor family and has a molecular mass of approximately 120 kDa. This receptor is mainly expressed in immune cells such as monocytes macrophages and dendritic cells. The receptor is located within endosomes and is responsible for recognizing single-stranded RNA (ssRNA) from viruses which leads to an immune response. TLR8 plays a part in detecting pathogens and activating innate immunity.
Biological function summary	TLR8 contributes to the immune system by playing a role in the innate immune response specifically in sensing viral components. TLR8 forms part of a larger receptor complex that includes MyD88 (myeloid differentiation primary response 88) an adaptor protein important for signaling processes within innate immunity. Upon recognizing ssRNA TLR8 initiates signaling cascades to trigger the release of inflammatory cytokines and other mediators that contribute to an antiviral response.
Pathways	TLR8 engages in the innate immune signaling pathway and the NF-kB pathway. These pathways are significant for the activation of immune responses and inflammation. MyD88 bridges TLR8 and downstream signaling events leading to the production and release of pro-inflammatory cytokines. In addition to MyD88 connections to molecules like IRAK4 illustrate how TLR8 signaling maintains a robust immune response to pathogen detection.
Associated diseases and disorders	TLR8 is linked to autoimmune conditions and viral infections. The receptor's activation by viral components can contribute to chronic inflammation seen in autoimmune diseases such as systemic lupus erythematosus. Additionally aberrant TLR8 signaling is associated with increased susceptibility to certain viral infections where its relationship with MyD88 influences both protective and pathological responses in diseases. Understanding TLR8's function may unveil new therapeutic approaches to manage immune-related disorders.

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.

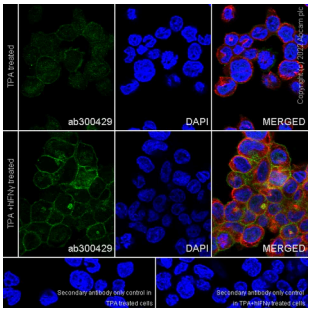
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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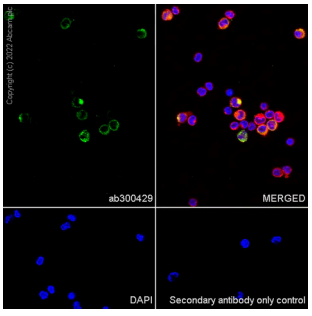
3 product images



Immunocytochemistry/ Immunofluorescence - Anti-TLR8 antibody [EPR24499-48] (ab300429)

TLR8 Immunocytochemistry/ Immunofluorescence staining of THP-1 (human monocytic leukemia monocyte) using rabbit Anti-TLR8 antibody

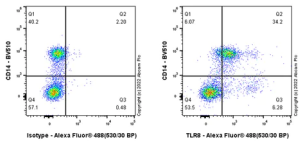
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized THP-1 (human monocytic leukemia monocyte) cells labelling TLR8 with ab300429 at 1/50 (8.74 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing weak staining in THP-1 cells treated 12-O-Tetradecanoylphorbol-13-acetate (80 nM) for 16 h, and showing increased staining at the membrane in THP-1 cell treated with 12-O-Tetradecanoylphorbol-13-acetate (80nM) for 16 h, then together with human Interferon-γ (20ng/ml) for another 8 h is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5 ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



Immunocytochemistry/ Immunofluorescence - Anti-TLR8 antibody [EPR24499-48] (ab300429)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Human PBMC (human peripheral blood mononuclear cell) cells labelling TLR8 with ab300429 at 1/50 (8.74 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing cytoplasmic and membrane staining in some human PBMCs is observed. ab195889 Anti-alpha Tubulin mouse

monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5 ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



Flow Cytometry (Intracellular) - Anti-TLR8 antibody [EPR24499-48] (ab300429)

Flow cytometric analysis of 2% paraformaldehyde fixed 0.1% Tween-20 permeabilized Human peripheral blood mononuclear cell (PBMC) cells labelling TLR8 with ab300429 at 1/50 dilution (1ug)/ Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody. Cells were stained with anti-CD14 conjugated to BV510. Fixed with 2% PFA for 10 min followed by intracellularly staining with rabbit IgG or ab300429.

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