abcam

ab300039

Anti-TLR5 antibody [EPR24497-39] (BSA and Azide free)

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR24497-39
Purification technique	Affinity purification Protein A
Concentration	1.015 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

mIHC

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

WB

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	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-

Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information TLR5

Function	Pattern recognition receptor (PRR) located on the cell surface that participates in the activation of innate immunity and inflammatory response (PubMed:11323673, PubMed:18490781). Recognizes small molecular motifs named pathogen-associated molecular pattern (PAMPs) expressed by pathogens and microbe-associated molecular patterns (MAMPs) usually expressed by resident microbiota (PubMed:29934223). Upon ligand binding such as bacterial flagellins, recruits intracellular adapter proteins MYD88 and TRIF leading to NF-kappa-B activation, cytokine secretion and induction of the inflammatory response (PubMed:11489966, PubMed:20855887). Plays thereby an important role in the relationship between the intestinal epithelium and enteric microbes and contributes to the gut microbiota composition throughout life (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Aliquoting information	Upon delivery aliquot

Notes

ab300039 is a carrier free version of ab300038.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

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.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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	Toll-like receptor 5 (TLR5) also known as CD285 is a protein that functions mechanically as a pattern recognition receptor. It has a mass of about 98 kDa and is expressed mainly in the tissues of the lung intestine and urogenital tract. TLR5 recognizes pathogen-associated molecular patterns specifically identifying and binding to flagellin a protein component of bacterial flagella. This engagement initiates a signaling cascade that results in an immune response.
Biological function summary	This receptor plays a central role in the innate immune system. TLR5 is part of a complex network of receptors that detect microbial infections and activate immune defense. When TLR5 binds to flagellin it triggers the production of inflammatory cytokines and activation of adaptive immune responses. This interaction helps in mobilizing immune cells to the site of infection providing the body with a robust defense mechanism against bacterial pathogens.

Pathways	TLR5 activation is an important component of the NF-kB signaling and MAPK pathways. These pathways lead to the transcription of genes involved in inflammation and immune response. TLR5 interacts with MyD88 an adaptor protein to facilitate the downstream signaling cascade. This involvement links TLR5 to not only NF-kB pathway but also connects it to other Toll-like receptors further integrating the immune signaling network.
Associated diseases and disorders	TLR5 has been connected to inflammatory bowel disease and chronic obstructive pulmonary disease (COPD). Abnormal TLR5 signaling can lead to excessive inflammation contributing to these conditions. In COPD TLR5 and its associated cytokines can exacerbate lung inflammation while in inflammatory bowel disease dysregulation may trigger improper intestinal immune responses. Research into TLR5's role in these diseases can illuminate potential therapeutic targets.

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

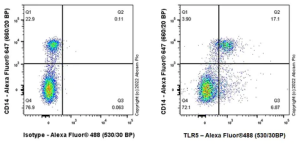
We do not recommend this combination. It is not covered by our product promise.

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.

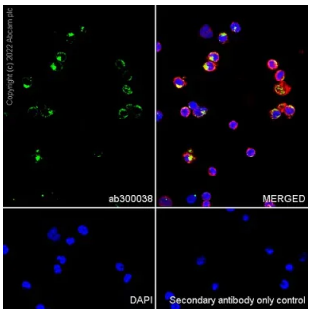
2 product images



Flow Cytometry - Anti-TLR5 antibody [EPR24497-39] (BSA and Azide free) (ab300039)

TLR5 Flow Cytometry staining of PBMC (Human peripheral blood mononuclear cells) using rabbit Anti-TLR5 antibody

Flow cytometric analysis of human peripheral blood mononuclear cell (PBMC) cells labelling TLR5 with ab300038 at 1/50 dilution / Right compared with a rabbit monoclonal IgG (ab172730) / Left isotype control. Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody. Cells were stained with rabbit IgG or ab300038. Then stained with anti-CD14 conjugated to Alexa Fluor® 647. Gated on viable cells.



Immunocytochemistry/ Immunofluorescence - Anti-TLR5 antibody [EPR24497-39] (BSA and Azide free) (ab300039)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeilized Human PBMC (human Peripheral Blood Mononuclear Cells) cells lebelling TLR5 with ab300038 at 1/500 dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic and membranous staining in the subsets of human PBMCs is observed.ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: PBS was used instead of primary antibody followed by secondary antibody (ab150081) Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution.

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