abcam

ab300462

Anti-TREM1 antibody [EPR26206-72] (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	EPR26206-72
Purification technique	Affinity purification Protein A
Concentration	1.013 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Not recommended

Species	Mouse, Rat, Human
Dilution info	-

Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Rat, Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Rat, Human
Dilution info	-
Notes	-

Target data

See full target information Trem1

Function	Cell surface receptor that plays important roles in innate and adaptive immunity by amplifying inflammatory responses. Upon activation by various ligands such as PGLYRP1, HMGB1 or HSP70, multimerizes and forms a complex with transmembrane adapter TYROBP/DAP12. In turn, initiates a SYK-mediated cascade of tyrosine phosphorylation, activating multiple downstream mediators such as BTK, MAPK1, MAPK3 or phospholipase C-gamma. This cascade promotes the neutrophil- and macrophage-mediated release of pro-inflammatory cytokines and/or chemokines, as well as their migration and thereby amplifies inflammatory responses that are triggered by bacterial and fungal infections (PubMed:23241959, PubMed:27328755). By also promoting the amplification of inflammatory signals that are initially triggered by Toll-like receptor (TLR) and NOD-like receptor engagement, plays a major role in the pathophysiology of acute and chronic inflammatory diseases of different etiologies including septic shock and atherosclerosis (By similarity).

Storage

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

Notes

ab300462 is a carrier free version of ab300461.

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.

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.

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.

Supplementary info

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

Activity summary	Triggering receptor expressed on myeloid cells 1 (TREM1) is a transmembrane receptor involved in amplifying inflammatory responses. TREM1 is known alternatively as CD354. This protein has a molecular mass of approximately 30 kDa and is expressed on the surface of neutrophils monocytes and macrophages. The receptor participates in innate immune responses and acts as an amplifier for inflammatory signals. It is often found in tissues that are engaged in inflammatory processes including lungs and intestines.
Biological function summary	TREM1 significantly enhances the immune response by activating myeloid cells. It does not form a standalone unit; instead it works with the adapter protein DNAX-activating protein of 12 kDa (DAP12) which pairs with TREM1 to transduce signals that promote cytokine and chemokine release. Through this interaction the receptor plays a role in the defense against bacterial infection boosting the body's immune response during pathogen assault. This function positions TREM1 as an important player in the regulation of acute inflammation.
Pathways	TREM1 engages significantly in the Toll-like receptor (TLR) signaling pathway and NF-kB pathway. In these pathways TREM1 interacts with various proteins that include TLRs and DAP12 intensifying inflammatory responses. The integration of TREM1 within these pathways suggests that it acts as an important modulator of inflammation capable of enhancing TLR-mediated signals for a stronger immune response.
Associated diseases and disorders	TREM1 connections extend to sepsis and inflammatory bowel disease (IBD). In the context of sepsis TREM1 expression correlates with increased inflammation and poor prognosis where it interacts with proteins involved in inflammatory pathways such as TNF-α. Concerning IBD TREM1's role in promoting inflammation links it to the pathogenesis of this disease where it could influence the severity and progression of IBD-related inflammation. Given these relationships therapeutic strategies targeting TREM1 could hold potential in modulating these conditions.

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.

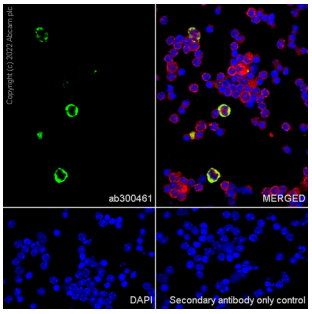
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

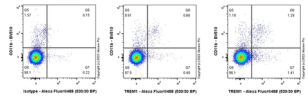
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3 product images



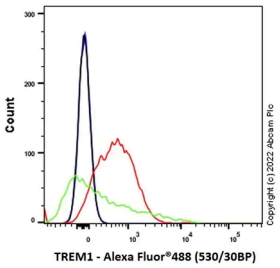
Immunocytochemistry/ Immunofluorescence - Anti-TREM1 antibody [EPR26206-72] (BSA and Azide free) (ab300462)

This data was developed using ab300461, the same antibody clone in a different buffer formulation.Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Mouse splenocyte cells labelling TREM1 with ab300461 at 1/500 (1.022 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 staining in subsets of mouse splenocytes 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-TREM1 antibody [EPR26206-72] (BSA and Azide free) (ab300462)

Flow cytometric analysis of Mouse splenocytes treated with 1ug/ml lipopolysaccharides (LPS) for 24h (Right) / Untreated control (Middle) / Isotype control (Left) cells labelling TREM1 with ab300461 at 1/50 dilution (1ug)/ Middle and Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody. Cells were co-stained with CD11b conjugated to BV510.Gated on viable cells.



Flow Cytometry - Anti-TREM1 antibody [EPR26206-72] (BSA and Azide free) (ab300462)

This data was developed using ab300461, the same antibody clone in a different buffer formulation. Flow cytometric analysis of RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) treated with 1ug/ml LPS for 24 hours (Red) / Untreated control (Green) cells labelling TREM1 with ab300461 at 1/50 dilution (1ug) (Red) and Green compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody. Gated on viable cells.

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