abcam

ab255881

Anti-TREM2 antibody [5F4] - BSA and Azide free

Recombinant

Key facts

Isotype	IgG2a
Host species	Rat
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	5F4
Purification technique	Ion exchange chromatography
Light chain type	kappa
Concentration	0.993 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	-

Notes	-

ELISA

Tested

Species	Mouse
Dilution info	-
Notes	-

WB

Not recommended

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information Trem2

Function	Forms a receptor signaling complex with TYROBP which mediates signaling and cell activation following ligand binding (PubMed:11241283). Acts as a receptor for amyloid-beta protein 42, a cleavage product of the amyloid-beta precursor protein APP, and mediates its uptake and degradation by microglia (PubMed:27477018, PubMed:29518356). Binding to amyloid-beta 42 mediates microglial activation, proliferation, migration, apoptosis and expression of pro-inflammatory cytokines, such as IL6R and CCL3, and the anti-inflammatory cytokine ARG1 (PubMed:27477018, PubMed:29518356). Acts as a receptor for lipoprotein particles such as LDL, VLDL, and HDL and for apolipoproteins such as APOA1, APOA2, APOB, APOE, APOE2, APOE3, APOE4, and CLU and enhances their uptake in microglia (PubMed:27477018). Binds phospholipids (preferably anionic lipids) such as phosphatidylserine, phosphatidylethanolamine, phosphatidylglycerol and sphingomyelin (By similarity). Regulates microglial proliferation by acting as an upstream regulator of the Wnt/beta-catenin signaling cascade (PubMed:28077724). Required for microglial phagocytosis of apoptotic neurons (PubMed:24990881). Also required for microglial activation and phagocytosis of myelin debris after neuronal injury and of neuronal synapses during synapse elimination in the developing brain (PubMed:15728241, PubMed:25631124, PubMed:28592261, PubMed:29752066). Regulates microglial chemotaxis and process outgrowth, and also the microglial response to oxidative stress and lipopolysaccharide (PubMed:28483841, PubMed:29663649, PubMed:29859094, PubMed:30232263). It suppresses PI3K and NF-kappa-B signaling in response to lipopolysaccharide; thus promoting phagocytosis, suppressing pro-inflammatory cytokine and nitric oxide production, inhibiting apoptosis and increasing expression of IL10 and TGFB (PubMed:29663649). During oxidative stress, it promotes anti-apoptotic NF-kappa-B signaling and ERK signaling (PubMed:28592261). Plays a role in microglial MTOR activation and metabolism (PubMed:28802038). Regulates age-related changes in microglial numbers (PubMed:25631124, PubMed:29752066, PubMed:30548312). Triggers activation of the immune responses in macrophages and dendritic cells. Mediates cytokine-induced formation of multinucleated giant cells which are formed by the fusion of macrophages (PubMed:18957693). In dendritic cells, receptor of SEMA6D with PLEXNA1 as coreceptor and mediates up-regulation of chemokine receptor CCR7 and dendritic cell maturation and survival (PubMed:16715077). Involved in the positive regulation of osteoclast differentiation (PubMed:16418779).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab255881 is the carrier-free version of ab252876.

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.

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

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.

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

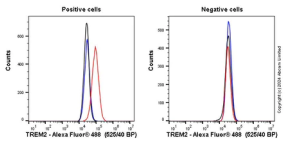
We do not recommend this combination. It is not covered by our product promise.

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-TREM2 antibody [5F4] - BSA and Azide free (ab255881)

TREM2 Flow Cytometry staining of RAW264.7 cells using rat Anti-TREM2 antibody

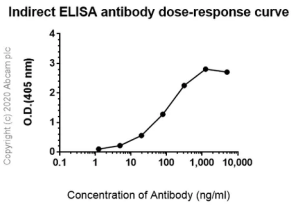
This data was developed using ab252876, the same antibody clone in a different buffer formulation.

Flow cytometry overlay histogram showing left Raw264.7 positive cells and right negative Neuro-2a stained with ab252876 (red line). The cells were incubated in 1x PBS containing 10µg/ml anti CD16/CD32 and 10% normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody (ab252876) (1x 10^6in 100µl at 0.04 µg/ml (1/12500)) for 30min on ice.

The secondary antibody Goat Anti-Rat IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min on ice

Isotype control antibody (black line) was Rat IgG2a, kappa monoclonal [RTK2758] - Isotype Control used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.



ELISA - Anti-TREM2 antibody [5F4] - BSA and Azide free (ab255881)

ELISA - Anti-TREM2 antibody [5F4] (ab252876).
Mouse TREM2 used at 1000 ng/ml.

ab252876 used at 0-5000 ng/ml.

Secondary is an Alkaline Phosphatase-conjugated AffiniPure Goat Anti-Rat IgG (H+L) used at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab252876).

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