abcam

ab225497

Alexa Fluor® 488 Anti-TMEM119 antibody [106-6] - Microglial marker

Anti-TMEM119 antibody [106-6] - Alexa Fluor® 488 conjugated (ab225497) is a rabbit recombinant monoclonal antibody detecting TMEM119 in **Flow Cytometry (Intra)**. Suitable for **Human, Mouse**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	106-6
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 (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	**The cellular localisation of this product has been verified in ICC/IF. This antibody may be used at 10 µg/mL.**

Species	Human
Dilution info	1/500
Notes	**The cellular localisation of this product has been verified in ICC/IF. This antibody may be used at 10 µg/mL.**

Flow Cyt

Expected

Species	Human, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information Tmem119

Function	Plays an important role in bone formation and normal bone mineralization (PubMed:20025746, PubMed:22416756, PubMed:26207632). Promotes the differentiation of myoblasts into osteoblasts (PubMed:20025746, PubMed:22416756, PubMed:22579779). May induce the commitment and differentiation of myoblasts into osteoblasts through an enhancement of BMP2 production and interaction with the BMP-RUNX2 pathway (PubMed:21239498, PubMed:22579779). Up-regulates the expression of ATF4 which plays a central role in osteoblast differentiation (PubMed:24362451). Essential for normal spermatogenesis and late testicular differentiation (PubMed:26207632).

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, Stable for 12 months at -20°C, Store in the dark

Notes

What is this antibody validated in?
Alexa Fluor® 488 Anti-TMEM119 antibody [106-6] (ab225497) is a rabbit recombinant monoclonal antibody and is validated for use in Flow Cytometry (Intra), Flow Cytometry (Flow Cyt) in Human, Mouse samples.

Related products
Antibody clone 106-6 is also available pre-conjugated to a variety of labels for your convenience – Anti-TMEM119 Alexa Fluor® 488 [106-6] (ab225497).

Specificity confirmed
The specificity of Alexa Fluor® 488 Anti-TMEM119 antibody [106-6] (ab225497) has been confirmed by Flow Cytometry (Intracellular) testing in Tmem119 Knockout Mouse CD11b+ cells samples.

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	TMEM119 also known as transmembrane protein 119 plays a role in cell membrane dynamics. It has a molecular mass of approximately 35 kDa. TMEM119 is specifically expressed in microglia in the central nervous system. Microglia serve essential functions in brain homeostasis and immune response. Given its expression profile TMEM119 serves as a marker to identify microglia especially in research focused on neurological tissues. Researchers often utilize techniques like microglial flow cytometry and microglial staining for identification and quantification of microglial populations often in frozen marker studies.
Biological function summary	TMEM119 regulates signaling pathways that maintain microglial identity and function but does not typically form part of larger complexes. It modulates microglial activation states and influences responses to central nervous system injury and inflammation. As a membrane protein it may interact with other surface molecules although specific binding partners are not well-characterized in current literature. Researchers value TMEM119 as a reliable marker in studies aiming to distinguish brain-resident microglia from infiltrating peripheral macrophages.
Pathways	TMEM119 functions as a modulator within inflammatory and neuroimmune pathways. It plays roles in the NF-kB signaling and the neuroinflammatory cascade. Its relationship with proteins like CD68 and Iba1 indicates it may influence pathways tied to immune responses and phagocytosis within nervous system contexts. Understanding the interactions and co-expression of TMEM119 with these proteins helps clarify its contribution to neuroimmune functions.
Associated diseases and disorders	TMEM119 links with neurological conditions such as Alzheimer's disease and multiple sclerosis. Altered expression of TMEM119 appears in disease states potentially contributing to pathogenesis through disrupted inflammatory responses. Its association with proteins such as TREM2 in Alzheimer's suggests that TMEM119 may play indirect roles in the progression of neurodegeneration. Furthermore high TMEM119 levels in pathological samples provide insights into microglial involvement in disease progression and potential targets for therapeutic interventions.

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

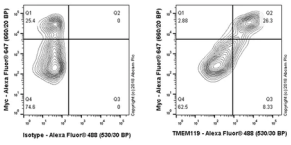
We do not recommend this combination. It is not covered by our product promise.

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.

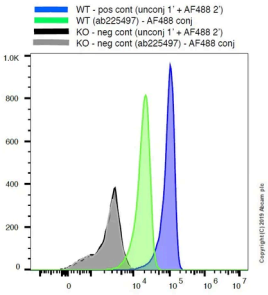
2 product images



Flow Cytometry (Intracellular) - Alexa Fluor® 488 Anti-TMEM119 antibody [106-6] - Microglial marker (ab225497)

TMEM119 Flow Cytometry (Intracellular) staining using rabbit Anti-TMEM119 antibody

Flow cytometry analysis of HEK-293T (human embryonic kidney) transfected with Myc-His tagged TMEM119 expression vector labelling TMEM119 with ab225497 at 1/500 dilution (right) compared with Rabbit IgG (monoclonal) Alexa Fluor® 488 ab199091 (left). Cells were surface-stained with ab225497, then fixed with 2% PFA for 10 minutes and permeabilised with 0.1% Tween-20 for 30 minutes. Next, they were stained with Alexa Fluor® 647 conjugated Myc-tag. Only Myc-tag (+) population showed TMEM119 positive staining.



This image is courtesy of an anonymous collaborator.

Flow Cytometry (Intracellular) - Alexa Fluor® 488 Anti-TMEM119 antibody [106-6] - Microglial marker (ab225497)

TMEM119 Flow Cytometry (Intracellular) staining using rabbit Anti-TMEM119 antibody

Flow cytometric analysis of wild type (WT) versus Tmem119 knockout (KO) CD11b+ cells labeling TMEM119 with ab225497 at 10 µg/mL (green) or the same clone unconjugated (ab210405) at 1 µg/mL with an Alexa 488 secondary antibody (purple), compared with TMEM119 KO primary mouse brain cells stained with ab210405 at 1 µg/mL (black) and ab225497 at 10 µg/mL (grey). Goat anti-Rabbit IgG (Alexa Fluor®488) at 1:1000 dilution was used as the secondary antibody.
No signal was detected on the surface of CD11b+ brain cells from TMEM119 KO mouse stained with either the unconjugated ab210405 (black) or conjugated ab225497 antibodies (grey); whereas in wildtype CD11b+ brain cells, cell surface staining was observed (green, Alexa conjugated ab225497; purple, unconjugated ab210405 plus secondary antibody).

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