

Alexa Fluor® 488 anti-TMEM119 (Extracellular) Antibody

Catalog# / Size	853317 / 25 µg 853318 / 100 µg
Clone	A16075D
Regulatory Status	RUO
Other Names	Transmembrane protein 119
Isotype	Mouse IgG2b, κ
Description	Microglia are the resident parenchymal myeloid cells of the CNS, and play an important role in development, homeostasis, disease, and injury. TMEM119 is a transmembrane protein and was identified as a microglia-specific marker in both mouse and human CNS. Moreover, TMEM119 immunoreactivity has been exclusively detected on a subset of Iba1(+) CD68(+) microglia with ramified and amoeboid morphologies in the brains of neurodegenerative diseases. TMEM119 also plays an important role in bone formation and normal bone mineralization. It promotes the differentiation of myoblasts into osteoblasts, and it may induce the commitment and differentiation of myoblasts into osteoblasts. TMEM119 is also essential for normal spermatogenesis and late testicular differentiation.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Recombinant human TMEM119 protein (extracellular domain)
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 488 under optimal conditions.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	ICFC - Quality tested ICC - Verified
Recommended Usage	<p>Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤ 0.5 µg per million cells in 100 µL volume. For immunocytochemistry, a concentration range of 1.25 - 10.0 µg/mL is recommended. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Alexa Fluor® 488 has a maximum emission of 519 nm when it is excited at 488 nm.</p> <p>Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p>View full statement regarding label licenses</p>
Excitation Laser	Blue Laser (488 nm)
Application Notes	<p>For microscopy, the antibody was found to work best when using fresh frozen human tissues. Communication by Dr. Frederick Christian Bennett at Stanford University, under review in Neuron.</p> <p>*The human TMEM119 full length plasmid was a courtesy gift from Dr. Ben Barres at Stanford University.</p>

Application References

1. Bennett FC, *et al.* 2018. *Neuron*. 98:1-14 [PubMed](#)

(PubMed link indicates BioLegend citation)

RRID AB_3662340 (BioLegend Cat. No. 853317)
AB_3662340 (BioLegend Cat. No. 853318)

Antigen Details

Structure TMEM119 is an 283 amino acid protein with a molecular mass of 30 kD.

Distribution Tissue distribution: TMEM119 is expressed in the brain, bone, and lymphoid tissues.
Cellular distribution: Membrane and endoplasmic reticulum.

Function TMEM119 is an important microglia marker and is implicated in neurodegenerative diseases.

Interaction TMEM119 interacts with SMAD1, SMAD5 and RUNX2.

Biology Area Cell Biology, Neuroscience, Neuroscience Cell Markers

Antigen References

1. Bennett ML, *et al.* 2016. *Proc Natl Acad Sci U S A*. 113
2. Satoh J, *et al.* 2016. *Neuropathology*. 36:39-49
3. Kawao N and Kaji H. 2015. *J Cell Biochem*. 116:687
4. Zrzavy T, *et al.* 2017. *Brain*. 140:1900-1913

Gene ID [338773](#)

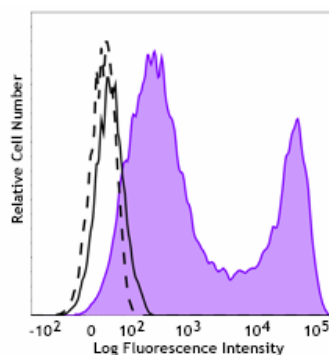
Related Protocols

- [Immunocytochemistry Staining Protocol](#)
- [Intracellular Flow Cytometry Staining Protocol](#)

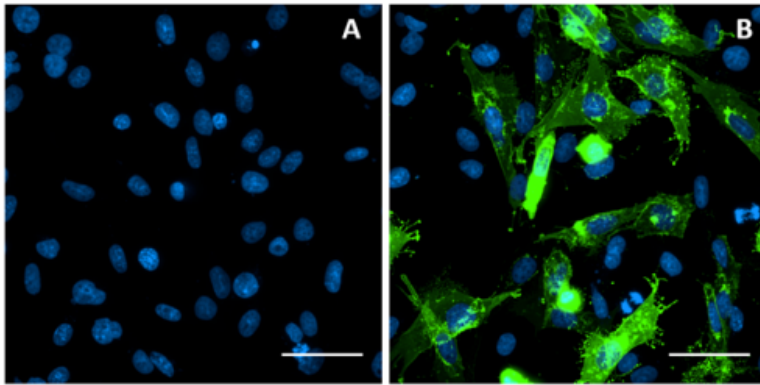
Other Formats

Purified anti-TMEM119 (Extracellular), TotalSeq™-A0445 anti-TMEM119 (Extracellular), TotalSeq™-B0445 anti-TMEM119 (Extracellular), TotalSeq™-C0445 anti-TMEM119 (Extracellular), Alexa Fluor® 594 anti-TMEM119 (Extracellular), Alexa Fluor® 647 anti-TMEM119 (Extracellular), PE anti-TMEM119 (Extracellular), Alexa Fluor® 488 anti-TMEM119 (Extracellular)

Product Data



CHO cells untransfected (negative control, open histogram), or transiently transfected with a human TMEM119 expression vector (positive control, two peaks are observed which represent cells which have not or have successfully incorporated the TMEM119 expression vector, filled histogram). Samples were fixed and permeabilized using the Cyto-Fast™ Fix/Perm Buffer Set (Cat. No. 426803) and intracellularly stained with Alexa Fluor® 488 anti-TMEM119 (clone A16075D) or Alexa Fluor® 488 Mouse IgG2b, κ isotype control (open histogram, dashed line) (representative histogram for non-transfected or transfected cells) (Cat. No. 400329).



Non-transfected CHO cells (negative control, panel A) or cells transiently transfected with a human TMEM119 expression vector (positive control, panel B) were fixed with PFA Fixation Buffer (Cat. No. 420801), permeabilized with methanol, and blocked with 5% FBS. Cells were stained with Alexa Fluor® 488 anti-TMEM119 (clone A16075D). Nuclei were counterstained with DAPI (Cat. No. 422801). The images were captured in a Revvity Operetta CLS™ High Content Analysis System with a 63X objective. Scale bar: 50 µm

For Research Use Only. Not for diagnostic or therapeutic use.

This product is supplied subject to the terms and conditions, including the limited license, located at www.biolegend.com/terms ("Terms") and may be used only as provided in the Terms. Without limiting the foregoing, BioLegend products may not be used for any Commercial Purpose as defined in the Terms, resold in any form, used in manufacturing, or reverse engineered, sequenced, or otherwise studied or used to learn its design or composition without express written approval of BioLegend. Regardless of the information given in this document, user is solely responsible for determining any license requirements necessary for user's intended use and assumes all risk and liability arising from use of the product. BioLegend is not responsible for patent infringement or any other risks or liabilities whatsoever resulting from the use of its products.

BioLegend, the BioLegend logo, and all other trademarks are property of BioLegend, Inc. or their respective owners, and all rights are reserved.

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587