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TMEM119 mouse specific

Cat.No. 400 004; Polyclonal Guinea pig antibody, 100 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	100 μ l antiserum, lyophilized. For reconstitution add 100 μ l H ₂ O, then aliquot and store at -20°C until use. Antibodies should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Applications	WB: not tested yet IP: not tested yet ICC: not tested yet IHC: 1:500 IHC-P: 1:500 IHC-Fr: 1:100 (see remarks)
Immunogen	Recombinant protein corresponding to the C-terminal region of mouse TMEM119 (UniProt Id: Q8R138)
Reactivity	Reacts with: mouse (Q8R138). Other species not tested yet.
Specificity	K.D. validated PubMed: <u>37635351</u>
Remarks	This antibody is recommended for mouse only. Due to significant differences of TMEM 119 among species, cross-reactivity is unlikely. IHC-Fr: 5 min MeOH and PFA fixation are possible.

TO BE USED IN VITRO / FOR RESEARCH ONLY NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Background

Microglia are resident myeloid cells of the central nervous system (CNS). They are ontogenetically and functionally distinct from monocyte-derived macrophages that infiltrate the CNS under pathological conditions. Transmembrane protein 119 (TMEM119) is a single-pass type I membrane protein that has been identified as a useful, highly selective microglia marker protein.

Selected References for 400 004

Protecting RNA quality for spatial transcriptomics while improving immunofluorescent staining quality. Hahn N. Bens M. Kempfer M. Reißig C. Schmidl L. Geis C

Frontiers in neuroscience (2023) 17: 1198154. . IHC_FR; tested species: mouse

URMC-099 prophylaxis prevents hippocampal vascular vulnerability and synaptic damage in an orthopedic model of delirium superimposed on dementia.

Miller-Rhodes P, Li H, Velagapudi R, Chiang W, Terrando N, Gelbard HA

FASEB journal: official publication of the Federation of American Societies for Experimental Biology (2022) 366: e22343.. IHC; tested species: mouse

CNS-Native Myeloid Cells Drive Immune Suppression in the Brain Metastatic Niche through Cxcl10.

Guldner IH, Wang Q, Yang L, Golomb SM, Zhao Z, Lopez JA, Brunory A, Howe EN, Zhang Y, Palakurthi B, Barron M, et al. Cell (2020): . . IHC-P; tested species: mouse

Identification and characterization of tumor-associated astrocyte subpopulations and their interactions with the tumor microenvironment in experimental glioblastomas.

Ghosh M, Pilanc-Kudlek P, Baluszek S, Jacek K, Poleszak K, Szadkowska P, Lenkiewicz AM, Gielniewski B, Ellert-Miklaszewska A, Castro MG, Kaminska B, et al.

PLoS biology (2025) 2310: e3002893. . IHC; tested species: mouse

A neurodegenerative cellular stress response linked to dark microglia and toxic lipid secretion.

Flury A, Aljayousi L, Park HJ, Khakpour M, Mechler J, Aziz S, McGrath JD, Deme P, Sandberg C, González Ibáñez F, Braniff O, et al. Neuron (2025) 1134: 554-571.e14. . IHC; tested species: mouse

Mutation in the rat interleukin 34 gene impacts macrophage development, homeostasis, and inflammation.

Huang S, Patkar OL, Schulze S, Carter-Cusack D, Millard S, Ranpura G, Green EK, Maxwell E, Kanesarajah J, Cowin G, Stimson D, et al.

Life science alliance (2025) 89: . . IHC; tested species: rat

Protocol for generation, quantification, and phenotyping of brain metastases in preclinical mouse models.

Rodriguez-Baena FJ, Sanchez-Laorden B

STAR protocols (2025) 63: 103978. . IHC; tested species: mouse

Sex-specific regulation of microglial MyD88 in HMGB1-Induced anxiety phenotype in mice.

Rawls A, Dziabis J, Nguyen D, Anbarci D, Clark M, Zhang G, Dzirasa K, Bilbo SD

Neurobiology of stress (2025) 36: 100721.. IHC; tested species: mouse

Kinetic changes in microglia-related retinal transcripts in experimental autoimmune uveoretinitis (EAU) of B10.RIII mice.

Kasper M, Karlstetter M, Wildschütz L, Scholz R, Busch M, Bauer D, Meyer Zu Hörste G, Thanos S, Langmann T, Heiligenhaus A

Journal of neuroinflammation (2025) 221: 37.. IHC-P; tested species: mouse

AA147 Alleviates Symptoms in a Mouse Model of Multiple Sclerosis by Reducing Oligodendrocyte Loss.

Aksu M, Kaschke K, Podojil JR, Chiang M, Steckler I, Bruce K, Cogswell AC, Schulz G, Kelly JW, Wiseman RL, Miller SD, et al.

Glia (2025) 736: 1241-1257. IHC; tested species: mouse

Microglial reprogramming enhances antitumor immunity and immunotherapy response in melanoma brain metastases.
Rodriguez-Baena FJ, Marquez-Galera A, Ballesteros-Martinez P, Castillo A, Diaz E, Moreno-Bueno G, Lopez-Atalaya JP, Sanchez-Laorden B

Cancer cell (2025):.. IHC; tested species: mouse

Access the online factsheet including applicable protocols at https://sysy.com/product/400004 or scan the QR-code.



FAQ - How should I store my antibody?

Shipping Conditions

 All our antibodies and control proteins / peptides are shipped lyophilized (vacuum freezedried) and are stable in this form without loss of quality at ambient temperatures for several weeks.

Storage of Sealed Vials after Delivery

- Unlabeled and biotin-labeled antibodies and control proteins should be stored at 4°C before reconstitution. They must not be stored in the freezer when still lyophilized!
 Temperatures below zero may cause loss of performance.
- Fluorescence-labeled antibodies should be reconstituted immediately upon receipt. Long term storage (several months) may lead to aggregation.
- **Control peptides** should be kept at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- The storage freezer must not be of the frost-free variety ("no-frost freezer"). This cycle
 between freezing and thawing (to reduce frost-build-up), which is exactly what should be
 avoided. For the same reason, antibody vials should be placed in an area of the freezer that
 has minimal temperature fluctuations, for instance towards the back rather than on a door
 shelf.
- Aliquot the antibody and store frozen (-20°C to -80°C). Avoid very small aliquots (below 20 µl)
 and use the smallest storage vial or tube possible. The smaller the aliquot, the more the stock
 concentration is affected by evaporation and adsorption of the antibody to the surface of the
 storage vial or tube. Adsorption of the antibody to the surface leads to a substantial loss of
 activity.
- The addition of glycerol to a final concentration of 50% lowers the freezing point of your stock and keeps your antibody at -20°C in liquid state. This efficiently avoids freeze and thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

• Store at -20°C to -80°C.

Monoclonal Antibodies

- Ascites and hybridoma supernatant should be stored at -20°C up to -80°C. Prolonged storage at 4°C is not recommended! Unlike serum, ascites may contain proteases that will degrade the antibodies.
- **Purified IgG** should be stored at -20°C up to -80°C. Adding a carrier protein like BSA will increase long term stability. Many of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Polyclonal Antibodies

- Crude antisera: With anti-microbials added, they may be stored at 4°C. However, frozen storage (-20°C up to -80°C) is preferable.
- Affinity purified antibodies: Less robust than antisera. Storage at -20°C up to -80°C is
 recommended. Adding a carrier protein like BSA will increase long term stability. Most of our
 antibodies already contain carrier proteins. Please refer to the data-sheet for detailed
 information.

Fluorescence-labeled Antibodies

• Store as a liquid with 1:1 (v/v) glycerol at -20°C. Protect these antibodies from light exposure.

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All our purified antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add
 the amount of deionized water given in the respective datasheet. If higher volumes are
 preferred, add water as mentioned above and then the desired amount of PBS and a
 stabilizing carrier protein (e.g. BSA) to a final concentration of 2%. Some of our antibodies
 already contain albumin. Take this into account when adding more carrier protein.
 For complete reconstitution, carefully remove the lid. After adding water, briefly vortex the
 solution. You can spin down the liquid by placing the vial into a 50 ml centrifugation tube filled
 with paper.
- If desired, add small amounts of azide or thimerosal to prevent microbial growth. This is especially recommended if you want to keep an aliquot a 4°C.
- After reconstitution of fluorescence-labeled antibodies, add 1:1 (v/v) glycerol to a final
 concentration of 50%. This lowers the freezing point of your stock and keeps your antibody in
 liquid state at -20°C.
- Glycerol may also be added to unlabeled primary antibodies. It is a suitable way to avoid freezethaw cycles.
- Please refer to our tips and hints for subsequent storage of reconstituted antibodies and control peptides and proteins.