SYSY Antibodies

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TMEM119 mouse specific

Cat.No. 400 002; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For **reconstitution** add 200 µl H_2O, 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 up to 1 : 1000 (see remarks) **IHC-P (FFPE)**: 1 : 500
Immunogen	Recombinant protein corresponding to the C-terminal region of mouse TMEM119 (UniProt Id: Q8R138)
Reactivity	Reacts with: mouse (Q8R138). Weaker signal: rat (B2RYL3). Other species not tested yet.
Remarks	This antibody is recommended for mouse only. Due to significant differences of TMEM 119 among species, cross-reactivity is unlikely. **IHC**: The antiserum produces some unspecific background in the cerebellum.

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. **T**rans**mem**brane 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 400 002

Microglia-neuron crosstalk through Hex-GM2-MGL2 maintains brain homeostasis.
Frosch M, Shimizu T, Wogram E, Amann L, Gruber L, Groisman AI, Fliegauf M, Schwabenland M, Chhatbar C, Zechel S, Rosewich H, et al.
Nature (2025) 6468086: 913-924. . **IHC, IHC-P; tested species: mouse**

Microglia with distinct origins and non-canonical phenotypes coexist within the border-like niche of the brain's circumventricular organs.
Van Hove H, Bastos J, Kancheva D, Vara-Pérez M, Dorion MF, Westermann F, Ulutekin C, Shakeri H, Ali L, Lievens AL, Mayoux M, et al.
Immunity (2026) : . . **IHC; tested species: mouse**

Microglial CX3CR1 signaling mediates synaptic pruning in degenerative cervical myelopathy.
Zhou CM, Asgarihafshejani A, Hong J, Brockie ST, Movahed M, Sadat S, Kouhzaei S, Fehlings MG
Neurobiology of disease (2026) 228: 107567. . **IHC; tested species: mouse**

Asrij/OCIAD1 depletion reduces inflammatory microglial activation and ameliorates Aβ pathology in an Alzheimer's disease mouse model.
Dongre P, Ramesh M, Govindaraju T, Inamdar MS
Journal of neuroinflammation (2025) 221: 89. . **IHC; tested species: mouse**

SorLA restricts TNFα release from microglia to shape a glioma-supportive brain microenvironment.
Kaminska P, Ovesen PL, Jakiel M, Obrebski T, Schmidt V, Draminski M, Bilska AG, Bieniek M, Anink J, Paterczyk B, Jensen AMG, et al.
EMBO reports (2024) 255: 2278-2305. . **IHC; tested species: mouse**

Redefining the ontogeny of hyalocytes as yolk sac-derived tissue-resident macrophages of the vitreous body.
Rosmus DD, Koch J, Hausmann A, Chiot A, Arnhold F, Masuda T, Kierdorf K, Hansen SM, Kuhrt H, Fröba J, Wolf J, et al.
Journal of neuroinflammation (2024) 211: 168. . **IHC; tested species: mouse**

Identification of a protective microglial state mediated by miR-155 and interferon-γ signaling in a mouse model of Alzheimer's disease.
Yin Z, Herron S, Silveira S, Kleemann K, Gauthier C, Mallah D, Cheng Y, Margeta MA, Pitts KM, Barry JL, Subramanian A, et al.
Nature neuroscience (2023) 267: 1196-1207. . **IHC; tested species: mouse**

Plaque contact and unimpaired Trem2 is required for the microglial response to amyloid pathology.
Wood JI, Wong E, Joghee R, Balbaa A, Vitanova KS, Stringer KM, Vanshoiack A, Phelan SJ, Launchbury F, Desai S, Tripathi T, et al.
Cell reports (2022) 418: 111686. . **IHC; tested species: mouse**

Expression of toll like receptor 8 (TLR8) in specific groups of mouse hippocampal interneurons.
Seizer L, Rahimi S, Santos-Sierra S, Drexel M
PloS one (2022) 175: e0267860. . **IHC; tested species: mouse**

Microglia have limited influence on early prion pathogenesis, clearance, or replication.
Race B, Williams K, Baune C, Striebel JF, Long D, Thomas T, Lubke L, Chesebro B, Carroll JA
PloS one (2022) 1710: e0276850. . **IHC-P; tested species: mouse**

Macrophages in close proximity to the vitreoretinal interface are potential biomarkers of inflammation during retinal vascular disease.
Rajesh A, Droho S, Lavine JA
Journal of neuroinflammation (2022) 191: 203. . **IHC; tested species: mouse**

Access the online factsheet including applicable protocols at https://sysy.com/product/400002 or scan the QR-code.

FAQ - How should I store my antibody?

Shipping Conditions

- All SYSY antibodies and control proteins/peptides are shipped lyophilized (vacuum freeze-dried). In this form, they remain stable 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. **Do not freeze lyophilized antibodies**. Temperatures below 0°C may impair performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long-term storage of lyophilized fluorophore-conjugates may cause aggregation.
- **Control peptides** should be stored at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- **Do not use frost-free ("no-frost") freezers.** These units periodically warm to remove ice buildup, causing freeze–thaw cycles that can damage antibodies.
- Store vials in areas with minimal temperature fluctuation - preferably toward the back of the freezer, not on the door.
- Aliquot reconstituted antibodies and store at –20°C to –80°C.
- Avoid very small aliquots (<20 µL), as evaporation and adsorption to tube surfaces can reduce antibody concentration and activity.
- Use the smallest practical storage vial to minimize surface area.
- Adding glycerol to a final concentration of 50% prevents freezing at -20°C, allowing storage in liquid form and effectively avoiding freeze–thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C

Monoclonal Antibodies

- **Ascites and hybridoma supernatant:** Store at -20°C to -80°C
  Prolonged storage at 4°C is not recommended, as proteases present in ascites may degrade antibodies.
- **Purified IgG:** Store at -20°C to -80°C
  Adding a carrier protein (e.g., BSA) enhances long-term stability.
  Many SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Polyclonal Antibodies

- **Crude antisera:** Can be stored at 4°C with antimicrobials added, but -20°C to -80°C is preferred
- **Affinity-purified antibodies:** Less stable than antisera; store at -20°C to -80°C
  Adding a carrier protein such as BSA improves long-term stability.
  Most SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Fluorescence-labeled Antibodies

- Store as a liquid with 1:1 (v/v) glycerol at -20°C, and protect from light exposure

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All purified SYSY antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the volume of deionized water specified in the corresponding datasheet. If a larger final volume is desired, first add the recommended amount of water, then adjust with PBS and, if needed, add a stabilizing carrier protein (e.g., BSA) to a final concentration of 2%. Some SYSY antibodies already contain albumin; please take this into account before adding additional carrier protein.

For complete reconstitution, carefully remove the vial cap. After adding water, briefly vortex the solution. To collect the liquid at the bottom of the vial, place the vial inside a 50 ml centrifuge tube padded with paper and centrifuge briefly.

- If desired, small amounts of azide or thimerosal may be added to prevent microbial growth. This is particularly recommended when storing an aliquot at 4°C.
- After reconstitution of fluorescence-labeled antibodies, add glycerol 1:1 (v/v) to achieve a final concentration of 50%. This prevents freezing at –20°C and keeps the antibody in liquid form, effectively avoiding freeze–thaw cycles.
- Glycerol may also be added to unlabeled primary antibodies as a general measure to prevent freeze–thaw damage.
- For further guidance, please refer to our **storage tips** and recommendations for reconstituted antibodies, control peptides, and control proteins.