SYSY Antibodies

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TMEM119 mouse specific

Cat.No. 400 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. Albumin and azide were added for stabilization. For **reconstitution** add 100 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C to -80°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 (FFPE)**: 1 : 100 up to 1 : 200
Clone	195H4
Subtype	IgG1 (κ light chain)
Immunogen	Recombinant protein corresponding to the C-terminal region of mouse TMEM119 (UniProt Id: Q8R138)
Reactivity	Reacts with: mouse (Q8R138). No signal: rat (B2RYL3), human (Q4V9L6). 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.

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 400 011

The RhoA-ROCK1/ROCK2 Pathway Exacerbates Inflammatory Signaling in Immortalized and Primary Microglia.
Glotfelty EJ, Tovar-Y-Romo LB, Hsueh SC, Tweedie D, Li Y, Harvey BK, Hoffer BJ, Karlsson TE, Olson L, Greig NH
Cells (2023) 1210: . . **ICC, IHC; tested species: mouse**

Pharmacological Upregulation of Microglial Lipid Droplet Alleviates Neuroinflammation and Acute Ischemic Brain Injury.
Li H, Liu P, Deng S, Zhu L, Cao X, Bao X, Xia S, Xu Y, Zhang B
Inflammation (2023) : . . **ICC, IHC; tested species: mouse**

Tenascin-C induction exacerbates post-stroke brain damage.
Chelluboina B, Chokkalla AK, Mehta SL, Morris-Blanco KC, Bathula S, Sankar S, Park JS, Vemuganti R
Journal of cerebral blood flow and metabolism : official journal of the International Society of Cerebral Blood Flow and Metabolism (2021) : 271678X211056392. . **IHC-P; tested species: mouse**

AXL Promotes Ischemic Myelin Repair Through Alleviating Myelin Debris Deposition and Lipid Droplets Accumulation.
Jia J, Gan Y, Li J, Li L, Meng H, Sun M, Ye L, Mao R, Cao X, Xia S, Bao X, et al.
Advanced science (Weinheim, Baden-Wurttemberg, Germany) (2026) 1310: e17825. . **IHC; tested species: mouse**

Antibiotic administration decreases microglia and macrophage recruitment in a sex-dependent manner following Degenerative Cervical Myelopathy.
Ossandón-Pino N, Musleh-Vega S, Pacheco JM, Retamal-Fredes E, Romero FE, Guzman C, Hepp MI, Castro C, Fehlings M, Ávila A, Vidal PM, et al.
Molecular neurobiology (2025) 631: 1. . **IHC; tested species: mouse**

Potential effects of microglia-vascular interactions during chronic systemic inflammation in the central nervous system of mice with systemic lupus erythematosus.
Shindo M, Tsuji T, Hartantyo RY, Saito Y, Ito A, Sugio S, Takeda I, Suganami T, Wake H
Nagoya journal of medical science (2025) 873: 509-520. . **IHC; tested species: mouse**

The cell-surface shared proteome of astrocytes and neurons and the molecular foundations of their multicellular interactions.
Wu L, Pandey V, Casha VH, Qu Z, Jami-Alahmadi Y, Gradinaru V, Wohlschlegel JA, Khakh BS
Neuron (2025) : . . **IHC; tested species: mouse**

Myeloid lineage C3 induces reactive gliosis and neuronal stress during CNS inflammation.
Garton T, Smith MD, Kesharwani A, Gharagozloo M, Oh S, Na CH, Absinta M, Reich DS, Zack DJ, Calabresi PA
Nature communications (2025) 161: 3481. . **IHC; tested species: mouse**

4R-cembranoid suppresses glial cells inflammatory phenotypes and prevents hippocampal neuronal loss in LPS-treated mice.
Rojas-Colón LA, Redell JB, Dash PK, Vegas PE, Vélez-Torres W
Journal of neuroscience research (2024) 1024: e25336. . **IHC; tested species: mouse**

Bacterial peptidoglycan signalling in microglia: Activation by MDP via the NF-κB/MAPK pathway.
Spielbauer J, Glotfelty E, Sarlus H, Harris RA, Heijtz RD, Karlsson TE
Brain, behavior, and immunity (2024) : . . **ICC; tested species: mouse**

Growth arrest specific protein 6 alleviated white matter injury after experimental ischemic stroke.
Jia J, Xu S, Hu J, Gan Y, Sun M, Xia S, Bao X, Zhang M, Xu Y
Journal of cerebral blood flow and metabolism : official journal of the International Society of Cerebral Blood Flow and Metabolism (2024) 441: 77-93. . **ICC; tested species: mouse**

Loss of Epitranscriptomic Modification N6-Methyladenosine (m6A) Reader YTHDF1 Exacerbates Ischemic Brain Injury in a Sexually Dimorphic Manner.
Chokkalla AK, Arruri V, Mehta SL, Vemuganti R
Translational stroke research (2024) : . . **IHC; tested species: mouse**

Access the online factsheet including applicable protocols at https://sysy.com/product/400011 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.