SYSY Antibodies

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Mover

Cat.No. 248 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin and azide were added for stabilization. For **reconstitution** add 50 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**: 1 : 1000 (AP staining) **IP**: not tested yet **ICC**: 1 : 200 up to 1 : 500 **IHC**: 1 : 100 **IHC-P (FFPE)**: not tested yet **DNA-PAINT**: external data (see remarks)
Immunogen	Recombinant protein corresponding to AA 1 to 266 from rat Mover (UniProt Id: A8WCF8)
Reactivity	Reacts with: rat (A8WCF8), mouse (Q9DBS2). Other species not tested yet.
Specificity	Specific for mover. Shows some cross-reactivity to Ribeye K.O. validated PubMed: 31787876
Remarks	**DNA-PAINT**: This antibody has been successfully applied and published for this method by customers (see application-specific references).

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

Background

Mover, also referred to as TPRG1L, is a presynaptic protein that is enriched in the synaptic vesicle fraction. In vivo studies reveal co-localization of mover with classical pre-synaptic markers like synaptotagmin 1, synaptophysin and bassoon.
Depending on the brain region examined mover differentially localizes to inhibitory or exitatory subsets of synapses.

Selected References for 248 003

Modulation of Presynaptic Release Probability by the Vertebrate-Specific Protein Mover.
Körber C, Horstmann H, Venkataramani V, Herrmannsdörfer F, Kremer T, Kaiser M, Schwenger DB, Ahmed S, Dean C, Dresbach T, Kuner T, et al.
Neuron (2015) 873: 521-33. . **WB, IHC; KD verified**

The Calmodulin Binding Region of the Synaptic Vesicle Protein Mover Is Required for Homomeric Interaction and Presynaptic Targeting.
Akula AK, Zhang X, Viotti JS, Nestvogel D, Rhee JS, Ebrecht R, Reim K, Wouters F, Liepold T, Jahn O, Bogeski I, et al.
Frontiers in molecular neuroscience (2019) 12: 249. . **WB, ICC; KO verified; tested species: mouse**

The synaptic vesicle protein Mover/TPRG1L is associated with lipid droplets in astrocytes.
Krohn J, Domart F, Do TT, Dresbach T
Glia (2023) : . . **ICC, IHC; tested species: mouse**

Spatial proteomics in neurons at single-protein resolution.
Unterauer EM, Shetab Boushehri S, Jevdokimenko K, Masullo LA, Ganji M, Sograte-Idrissi S, Kowalewski R, Strauss S, Reinhardt SCM, Perovic A, Marr C, et al.
Cell (2024) 1877: 1785-1800.e16. . **DNA_PAINT; tested species: rat**

A High-Resolution Method for Quantitative Molecular Analysis of Functionally Characterized Individual Synapses.
Holderith N, Heredi J, Kis V, Nusser Z
Cell reports (2020) 324: 107968. . **IHC; tested species: rat**

Quantifying the Heterogeneous Distribution of a Synaptic Protein in the Mouse Brain Using Immunofluorescence.
Wallrafen R, Dresbach T, Viotti JS
Journal of visualized experiments : JoVE (2019) 143: . . **IHC; tested species: mouse**

The Presynaptic Protein Mover Is Differentially Expressed Across Brain Areas and Synapse Types.
Wallrafen R, Dresbach T
Frontiers in neuroanatomy (2018) 12: 58. . **IHC; tested species: mouse**

The Kohlschütter-Tönz syndrome associated gene Rogdi encodes a novel presynaptic protein.
Riemann D, Wallrafen R, Dresbach T
Scientific reports (2017) 71: 15791. . **ICC; tested species: rat**

Bassoon-disruption slows vesicle replenishment and induces homeostatic plasticity at a CNS synapse.
Mendoza Schulz A, Jing Z, Sánchez Caro JM, Wetzel F, Dresbach T, Strenzke N, Wichmann C, Moser T
The EMBO journal (2014) 335: 512-27. . **IHC**

Selected General References

Mover is a novel vertebrate-specific presynaptic protein with differential distribution at subsets of CNS synapses.
Kremer T et al. FEBS Lett. (2007) PubMed:17869247

Access the online factsheet including applicable protocols at https://sysy.com/product/248003 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.