

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 ₂ O 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 IP: not tested yet ICC: 1 : 200 up to 1 : 500 IHC: 1 : 100 IHC-P: not tested yet DNA-PAINT: yes (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 used for DNA-PAINT application (see Unterauer et al., 2024; PMID: 38552614).

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 excitatory 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, Strenke 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 our antibodies and control proteins / peptides are shipped lyophilized (vacuum freeze-dried) 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 freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.