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TRIM46

Cat.No. 377 003; 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**: not tested yet **IP**: not tested yet **ICC**: 1 : 500 **IHC**: 1 : 500 (see remarks) **IHC_P**: 1 : 500
Immunogen	Recombinant protein corresponding to AA 1 to 561 from rat Trim46 (UniProt Id: A0A0G2JXN2)
Reactivity	Reacts with: rat (A0A0G2JXN2), mouse (Q7TNM2). Other species not tested yet.
Remarks	**IHC**: For optimal signal to noise ratio, we recommend our recombinant rabbit TRIM46 antibody 377 008

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

Background

The **tri**partite **m**otif containing protein **TRIM 46**, also referred to as **TRIFIC**, is a member of the C-I TRIM family, a subfamily of the RBCC (N-terminal RING finger/B-box/coiled coil)/TRIM superfamily. TRIM 46 localizes to newly specified axons and, at later stages, to the axon initial segment (AIS). By forming closely spaced parallel microtubule bundles it plays a crucial role in the initial polarization of neuronal cells.

Selected References for 377 003

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**

Efficient axonal transport of endolysosomes relies on the balanced ratio of microtubule tyrosination and detyrosination.
Konietzny A, Han Y, Popp Y, van Bommel B, Sharma A, Delagrange P, Arbez N, Moutin MJ, Peris L, Mikhaylova M
Journal of cell science (2024) : . . **ICC; tested species: mouse**

Combined kinesin-1 and kinesin-3 activity drives axonal trafficking of TrkB receptors in Rab6 carriers.
Zahavi EE, Hummel JJA, Han Y, Bar C, Stucchi R, Altelaar M, Hoogenraad CC
Developmental cell (2021) : . . **ICC; tested species: rat**

Centrosome-mediated microtubule remodeling during axon formation in human iPSC-derived neurons.
Lindhout FW, Portegies S, Kooistra R, Herstel LJ, Stucchi R, Hummel JJA, Scheefhals N, Katrukha EA, Altelaar M, MacGillavry HD, Wierenga CJ, et al.
The EMBO journal (2021) : e106798. . **ICC; tested species: human,rat**

Axonal TAU Sorting Requires the C-terminus of TAU but is Independent of ANKG and TRIM46 Enrichment at the AIS.
Bell M, Bachmann S, Klimek J, Langerscheidt F, Zempel H
Neuroscience (2021) 461: 155-171. . **ICC; tested species: mouse**

Selected General References

TRIM46 Controls Neuronal Polarity and Axon Specification by Driving the Formation of Parallel Microtubule Arrays.
van Beuningen SF, Will L, Harterink M, Chazeau A, van Battum EY, Frias CP, Franker MA, Katrukha EA, Stucchi R, Vocking K, Antunes AT, et al.
Neuron (2015) 886: 1208-26. .

Access the online factsheet including applicable protocols at https://sysy.com/product/377003 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.