

Reelin

Cat.No. 534 005; Polyclonal Guinea pig 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 : 500 up to 1 : 1000 (AP staining) IP: not tested yet ICC: 1 : 500 IHC: 1 : 500 IHC-P: 1 : 200 up to 1 : 1000
Immunogen	Recombinant protein corresponding to the N-terminal part of mouse Reelin. (UniProt Id: Q60841)
Reactivity	Reacts with: mouse (Q60841), rat (P58751). Other species not tested yet.
Remarks	WB: Due to the large size of this protein, we recommend NuPAGE 3-8% Tris-Acetate gels for SDS-PAGE. IHC: Antigen retrieval with citrate buffer pH 6 can be applied to improve the signal to noise ratio.

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

Background

Reelin is a large secreted extracellular matrix glycoprotein. Its structure includes eight EGF-like repeats with two cleavage sites between the repeats. The central cleavage fragment is the active one as it contains the receptor binding domain (1-4).

Reelins scientific history begins in 1951 with the report of a mouse exhibiting an reeling gait (5), later found to carry a spontaneous mutation in the Reln gene. The most striking phenotype of the reeler mouse is the abnormal layering of neurons in the brain.

During development, Reelin regulates neuronal migration and proper cortical layer formation by guiding neurons to their correct positions (1,3,6). It is predominantly expressed by Cajal–Retzius cells in the hippocampus and cortex and its expression is highest during embryonic and early postnatal stages. After birth, as Cajal–Retzius cells decline, a subset of inhibitory interneurons begins to express Reelin (1-4). In the adult brain, Reelin modulates synaptic plasticity and neuroblast migration as well as dendritic spine formation (1-3).

Reelin binds to membrane receptors, including ApoER2 and VLDLR, initiating a signaling cascade via the adaptor protein Dab1, which is crucial for cytoskeletal stability and neuron positioning (1-3).

Altered Reelin expression has been associated with a variety of brain disorders including lissencephaly, Alzheimer's disease, epilepsy, autism spectrum disorder, and schizophrenia (1,2,6,7). In addition to the brain, Reelin is also expressed in various non-neuronal tissues and has been suggested to be implicated in processes involving the immune system, liver fibrosis and several cancers (3,4).

Selected General References

Reelin: Neurodevelopmental Architect and Homeostatic Regulator of Excitatory Synapses.
Wasser CR et al. J Biol Chem (2017) PubMed:27994051

Shared molecular signature in Alzheimer's disease and schizophrenia: A systematic review of the reelin signaling pathway.
Valderrama-Mantilla AI et al. Neurosci Biobehav Rev (2025) PubMed:39894421

Reelin Signaling in Neurodevelopmental Disorders and Neurodegenerative Diseases.
Joly-Amado A et al. Brain Sci (2023) PubMed:37891846

Reelin through the years: From brain development to inflammation.
Alexander A et al. Cell Rep (2023) PubMed:37339050

Reelin Functions, Mechanisms of Action and Signaling Pathways During Brain Development and Maturation.
Jossin Y et al. Biomolecules (2020) PubMed:32604886

Control of Neuronal Migration and Aggregation by Reelin Signaling in the Developing Cerebral Cortex.
Hirota Y et al. Front Cell Dev Biol (2017) PubMed:28507985

Two new mutants, 'trembler' and 'reeler', with neurological actions in the house mouse (Mus musculus L.).
FALCONER DS et al. J Genet (1951) PubMed:24539699

Access the online factsheet including applicable protocols
at <https://sysy.com/product/534005> 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 at 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.