SYSY Antibodies

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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_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 : 500 up to 1 : 1000 (AP staining) (see remarks) **IP**: not tested yet **ICC**: 1 : 500 **IHC**: 1 : 500 (see remarks) **IHC-P (FFPE)**: 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 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.