SYSY Antibodies

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Ribeye A-domain

Cat.No. 192 103; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin was 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**: not tested yet **IHC**: 1 : 200 up to 1 : 500 (see remarks) **IHC-P (FFPE)**: 1 : 200
Immunogen	Recombinant protein corresponding to AA 95 to 207 from rat Ribeye (UniProt Id: Q9EQH5-2)
Reactivity	Reacts with: rat (Q9EQH5-2), mouse (P56546-2), human (P56545-2). Other species not tested yet.
Specificity	This antibody recognizes only ribeye and not CtBP 2. K.O. validated PubMed: 35742873
Remarks	**IHC**: For optimal results in retina tissue, follow the retina protocol.

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

Background

The photoreceptor ribbon synapse is a unique type of synapse specialized for the tonic release of neurotransmitter in the dark. **Ribeye** is a self-aggregating protein and is one of the major scaffolding components of the ribbon on which the neurotransmitter containing vesicles are tethered. The protein consists of a unique A-domain and a B-domain. With the exception of the first 20 amino acids the B-domain is identical to the transcriptional corepressor CtBP 2. Both proteins originate from the same gene.

Selected References for 192 103

α2δ-4 is required for the molecular and structural organization of rod and cone photoreceptor synapses.
Kerov V, Laird JG, Joiner ML, Knecht S, Soh D, Hagen J, Gardner SH, Gutierrez W, Yoshimatsu T, Bhattarai S, Puthussery T, et al.
The Journal of neuroscience : the official journal of the Society for Neuroscience (2018) : . . **WB, IHC; tested species: mouse**

Establishing synthetic ribbon-type active zones in a heterologous expression system.
Kapoor R, Do TT, Schwenzer N, Petrovic A, Dresbach T, Lehnart SE, Fernández-Busnadiego R, Moser T
eLife (2026) 13: . . **ICC; tested species: human**

Generation of human pineal gland organoids with melatonin production for disease modeling.
Kiral FR, Yang WS, Iyilikci O, Lu X, Kim J, Choe MS, Lo C, Zhong M, Kim KY, Jiang YH, Park IH, et al.
Cell stem cell (2026) 331: 91-107.e9. . **IHC; tested species: human**

Profound Effect of Light on Cysts in X-Linked Retinoschisis.
Hassan S, Stanley ST, Brandauer E, Hsu Y, Rankin TJ, Laird J, Lobeck B, Thompson JM, Bengen MA, Wang K, Drack AV, et al.
Investigative ophthalmology & visual science (2026) 672: 1. . **WB; tested species: mouse**

Charting the nanotopography of inner hair cell synapses using MINFLUX nanoscopy.
Kapoor R, Kim H, Garlick E, Lima MADRBF, Esch K, Ruhwedel T, Möbius W, Wolf F, Moser T
Science advances (2025) 1145: eady4344. . **IHC; tested species: mouse**

Dicer is essential for proper maturation, composition, and function in the postnatal retina.
Kang S, Larbi D, Bruns E, Hahne K, Khodadadi-Jamayran A, Sreenivasaiah C, Carneiro ML, Andrade M, Batsuuri K, Chen S, Jager J, et al.
iScience (2025) 2811: 113794. . **IHC; tested species: mouse**

Persistence of vestibular function in the absence of glutamatergic transmission from hair cells.
Mukhopadhyay M, Modgekar R, Yang-Hood A, Ohlemiller KK, Militchin V, Xiao M, Shen Z, Rensing NR, Wong M, Lee SJ, Seal RP, et al.
bioRxiv : the preprint server for biology (2025) : . . **IHC; tested species: mouse**

P23H rhodopsin accumulation causes transient disruptions to synaptic protein levels in rod photoreceptors in a model of retinitis pigmentosa.
Thompson SL, Crowder SM, Hekmatara M, Sechrest ER, Deng WT, Robichaux MA
Disease models & mechanisms (2025) 186: . . **IHC; tested species: mouse**

Presynaptic Nrxn3 is essential for ribbon-synapse maturation in hair cells.
Jukic A, Lei Z, Cebul ER, Pinter K, Tadesse Y, Jarysta A, David S, Mosqueda N, Tarchini B, Kindt K
Development (Cambridge, England) (2024) : . . **IHC; tested species: mouse**

Two new mouse alleles of Ocm and Slc26a5.
Lachgar-Ruiz M, Ingham NJ, Martelletti E, Chen J, James E, Panganiban C, Lewis MA, Steel KP
Hearing research (2024) 452: 109109. . **IHC; tested species: mouse**

CaBP1 and 2 enable sustained CaV1.3 calcium currents and synaptic transmission in inner hair cells.
Oestreicher D, Chepurwar S, Kusch K, Rankovic V, Jung S, Strenzke N, Pangrsic T
eLife (2024) 13: . . **IHC; tested species: mouse**

Access the online factsheet including applicable protocols at https://sysy.com/product/192103 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.