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**: 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**

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**

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**

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**

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**

Ectopic Rod Photoreceptor Development in Mice with Genetic Deficiency of WNT2B.
Blomfield AK, Maurya M, Bora K, Pavlovich MC, Yemanyi F, Huang S, Fu Z, O'Connell AE, Chen J
Cells (2023) 127: . . **IHC; tested species: mouse**

Eliminating Synaptic Ribbons from Rods and Cones Halves the Releasable Vesicle Pool and Slows Down Replenishment.
Mesnard CS, Barta CL, Sladek AL, Zenisek D, Thoreson WB
International journal of molecular sciences (2022) 2312: . . **IHC; KO verified; tested species: mouse**

RIBEYE B-Domain Is Essential for RIBEYE A-Domain Stability and Assembly of Synaptic Ribbons.
Shankhwar S, Schwarz K, Katiyar R, Jung M, Maxeiner S, Südhof TC, Schmitz F
Frontiers in molecular neuroscience (2022) 15: 838311. . **WB; tested species: mouse**

The SNARE protein SNAP-25 is required for normal exocytosis at auditory hair cell ribbon synapses.
Calvet C, Peineau T, Benamer N, Cornille M, Lelli A, Plion B, Lahlou G, Fanchette J, Nouaille S, Boutet de Monvel J, Estivalet A, et al.
iScience (2022) 2512: 105628. . **IHC; tested species: mouse**

Rapid 3D-STORM imaging of diverse molecular targets in tissue.
Albrecht NE, Jiang D, Akhanov V, Hobson R, Speer CM, Robichaux MA, Samuel MA
Cell reports methods (2022) 27: 100253. . **IHC; tested species: human,mouse**

Neuroplastin genetically interacts with Cadherin 23 and the encoded isoform Np55 is sufficient for cochlear hair cell function and hearing.
Newton S, Kong F, Carlton AJ, Aguilar C, Parker A, Codner GF, Teboul L, Wells S, Brown SDM, Marcotti W, Bowl MR, et al.
PLoS genetics (2022) 181: e1009937. . **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 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.