

Bassoon

Cat.No. 141 003; 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 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 : 100 up to 1 : 1000 (AP staining) (see remarks) IP: not tested yet ICC: 1 : 200 up to 1 : 2000 IHC: 1 : 200 IHC-P: 1 : 500 ExM: 1 : 400 (see remarks) ELISA: yes (see remarks)
Immunogen	Recombinant protein corresponding to residues near the carboxy terminus of rat Bassoon. (UniProt Id: O88778)
Reactivity	Reacts with: rat (O88778), mouse (O88737). No signal: chicken. Other species not tested yet.
Specificity	Specific for Bassoon
Remarks	WB: Due to its large size, bassoon requires special gel-electrophoresis and Western blot protocols for visualization by immunoblotting. Excellent results can be obtained with the 4-12% TRIS-glycine gradient gels from anamed or NuPAGE 3-8% TRIS-Acetate gradient gels from invitrogen. ExM: This antibody has been successfully used for the epitope-preserving magnified analysis of the proteome (eMAP) expansion microscopy method (Park et al. 2021. PMID: 34767453). ELISA: Suitable as detector antibody for sandwich-ELISA with cat. no. 141 021 or 141 011 as capture antibody. The ELISA-protocol for membrane proteins is recommended.

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

Background

Bassoon is a large protein which consists of an N-terminal Zn²⁺ finger and several piccolo-bassoon homology domains (PBH-domains). It is generally found together with piccolo, a related huge multi-domain protein of the CAZ (cytoskeletal matrix assembled at active zones). Bassoon was suggested to be a scaffolding element of the presynapse but deletion experiments in mice have shown that bassoon is also involved in synaptic vesicle cycling. Probably bassoon interacts with other protein factors via its Zn²⁺ domain but the potential partners have not been determined yet.

Selected References for 141 003

- Filamin A organizes γ-aminobutyric acid type B receptors at the plasma membrane.
Jobin ML, Siddig S, Koszegi Z, Lanoiselée Y, Khayenko V, Sungkaworn T, Werner C, Seier K, Misigaiski C, Mantovani G, Sauer M, et al.
Nature communications (2023) 141: 34. . **EXM, ICC; tested species: mouse**
- Epitope-preserving magnified analysis of proteome (eMAP).
Park J, Khan S, Yun DH, Ku T, Villa KL, Lee JE, Zhang Q, Park J, Feng G, Nedivi E, Chung K, et al.
Science advances (2021) 746: eabf6589. . **CLARITY; tested species: mouse, marmoset**
- How to Make an Active Zone: Unexpected Universal Functional Redundancy between RIMs and RIM-BPs.
Acuna C, Liu X, Südhof TC
Neuron (2016) 914: 792-807. . **WB**
- Expression of Ttyh1, a member of the Tweety family in neurons in vitro and in vivo and its potential role in brain pathology.
Stefaniuk M, Swiech L, Dzwonek J, Lukasiuk K
Journal of neurochemistry (2010) 1155: 1183-94. . **IHC; tested species: rat**
- Microglia-synapse engulfment via PtdSer-TREM2 ameliorates neuronal hyperactivity in Alzheimer's disease models.
Rueda-Carrasco J, Sokolova D, Lee SE, Childs T, Jurčáková N, Crowley G, De Schepper S, Ge JZ, Lachica JI, Toomey CE, Freeman OJ, et al.
The EMBO journal (2023) 4219: e113246. . **ICC; tested species: rat**
- Astrocytic TDP-43 dysregulation impairs memory by modulating antiviral pathways and interferon-inducible chemokines.
Licht-Murava A, Meadows SM, Palaguachi F, Song SC, Jackvony S, Bram Y, Zhou C, Schwartz RE, Froemke RC, Orr AL, Orr AG, et al.
Science advances (2023) 916: eade1282. . **ICC; tested species: mouse**
- Nanoscale rules governing the organization of glutamate receptors in spine synapses are subunit specific.
Hruska M, Cain RE, Dalva MB
Nature communications (2022) 131: 920. . **ICC; tested species: rat**
- SRF depletion in early life contributes to social interaction deficits in the adulthood.
Roszkowska M, Krysiak A, Majchrowicz L, Nader K, Beroun A, Michaluk P, Pekala M, Jaworski J, Kondrakiewicz L, Puścian A, Knapska E, et al.
Cellular and molecular life sciences : CMLS (2022) 795: 278. . **ICC; tested species: rat**
- α-Synuclein induced cholesterol lowering increases tonic and reduces depolarization-evoked synaptic vesicle recycling and glutamate release.
Lazarevic V, Yang Y, Paslawski W, Svenningsson P
NPJ Parkinson's disease (2022) 81: 71. . **ICC; tested species: mouse**
- TDP-43 proteinopathy impairs mRNP granule mediated postsynaptic translation and mRNA metabolism.
Wong CE, Jin LW, Chu YP, Wei WY, Ho PC, Tsai KJ
Theranostics (2021) 111: 330-345. . **ICC; tested species: mouse**
- SHANK2 Mutations Result in Dysregulation of the ERK1/2 Pathway in Human Induced Pluripotent Stem Cells-Derived Neurons and Shank2(-/-) Mice.
Lutz AK, Pérez Arévalo A, Ioannidis V, Stirmlinger N, Demestre M, Delorme R, Bourgeron T, Boeckers TM
Frontiers in molecular neuroscience (2021) 14: 773571. . **ICC; tested species: human**

Access the online factsheet including applicable protocols at <https://sysy.com/product/141003> 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.