abcam

ab283704

Anti-Bassoon/BSN antibody [EPR25379-3] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR25379-3
Purification technique	Affinity purification Protein A
Concentration	1.03 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-

Notes	-

WB

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse, Rat
Dilution info	-
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Mouse, Rat
Dilution info	-

Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse, Rat
Dilution info	-
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

Target data

See full target information Bsn

Function

Scaffold protein of the presynaptic cytomatrix at the active zone (CAZ) which is the place in the synapse where neurotransmitter is released (PubMed:12628168, PubMed:12628169, PubMed:19812333). After synthesis, participates in the formation of Golgi-derived membranous organelles termed Piccolo-Bassoon transport vesicles (PTVs) that are transported along axons to sites of nascent synaptic contacts (By similarity). At the presynaptic active zone, regulates the spatial organization of synaptic vesicle cluster, the protein complexes that execute membrane fusion and compensatory endocytosis (By similarity). Also functions in processes other than assembly such as the regulation of specific presynaptic protein ubiquitination by interacting with SIAH1 or the regulation of presynaptic autophagy by associating with ATG5 (By similarity) (PubMed:28231469). Also mediates synapse to nucleus communication leading to reconfiguration of gene expression by associating with the transcriptional corepressor CTBP1 and by subsequently reducing the size of its pool available for nuclear import (By similarity). Inhibits the activity of the proportion of DAO enzyme that localizes to

	the presynaptic active zone, which may modulate synaptic transmission (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab283704 is the carrier-free version of ab283680.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Bassoon also known as BSN or Bassoon protein functions as a major component in the active zone of synapses participating in the organization and regulation of

	neurotransmitter release. The protein has a reported molecular mass of approximately 420 kDa. Expression of the Bassoon protein takes place prominently in neuronal tissues especially within the central nervous system. Its structure and size contribute to its role in maintaining the integrity of synaptic architecture.
Biological function summary	Bassoon plays an important role in the presynaptic active zone by facilitating efficient synaptic vesicle docking and priming. It acts as a scaffold protein within the presynaptic terminal forming part of a larger molecular complex that includes Piccolo and other cytomatrix proteins. These scaffolding arrangements help ensure precise neurotransmitter release affecting synaptic strength and plasticity. Its integration into these complexes highlights its significance in neuronal communication and functionality.
Pathways	Bassoon actively participates in neurotransmission pathways especially those related to synaptic vesicle cycle and neurotransmitter release. It collaborates with proteins like RIM and Munc13 in these processes stabilizing the apparatus required for synaptic vesicle fusion and exocytosis. Through these interactions Bassoon contributes to the regulation of neurotransmitter release and is essential for proper synaptic function.
Associated diseases and disorders	Bassoon links to various neurological conditions prominently neurodegenerative disorders like Alzheimer's disease and bipolar disorder. Changes in Bassoon expression or function could disrupt synaptic integrity thereby contributing to disease pathology. Research has associated alterations in calcium channel complexes which involve Bassoon with these disorders. Understanding Bassoon's molecular interactions may provide insights into the development and progression of such neurological diseases highlighting its significance in biomedical research.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

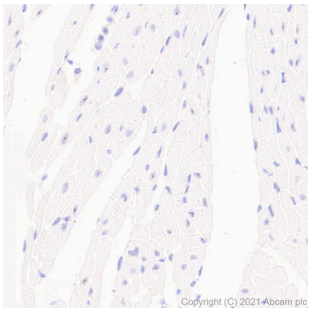
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

14 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Bassoon/BSN antibody [EPR25379-3] - BSA and Azide free (ab283704)

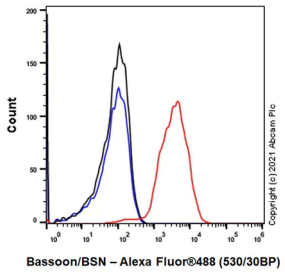
Bassoon/BSN Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Bassoon/BSN antibody

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Immunohistochemical analysis of paraffin-embedded Mouse cardiac muscle tissue labelling Bassoon/BSN with ab283680 at 1/500 (1.122 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). The section was incubated with ab283680 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Negative control: No staining on mouse cardiac muscle (PMID: 9679147)

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

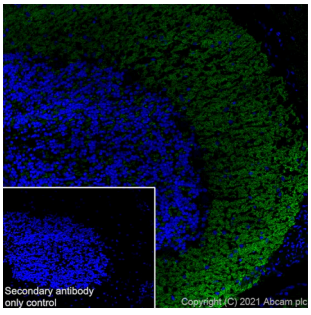
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Flow Cytometry (Intracellular) - Anti-Bassoon/BSN antibody [EPR25379-3] - BSA and Azide free (ab283704)

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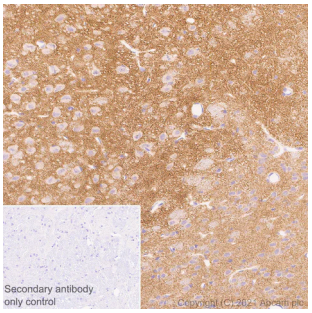
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Secondary antibody control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/ml) dilution.



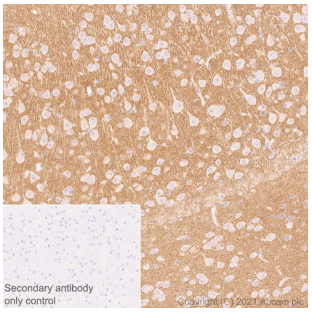
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Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labelling Bassoon/BSN with ab283680 at 1/500 (1.122 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Cytoplasmic staining on rat cerebrum (PMID: 9679147). The section was incubated with ab283680 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

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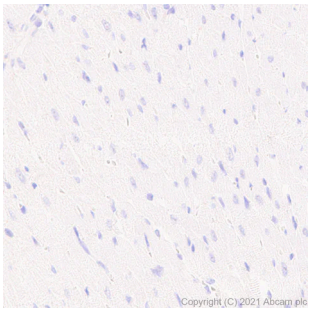
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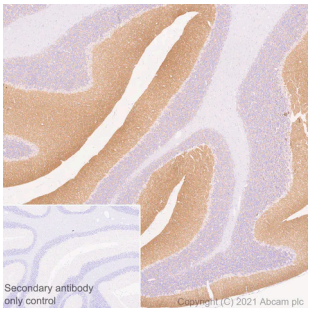
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Negative control: No staining on rat cardiac muscle (PMID: 9679147).

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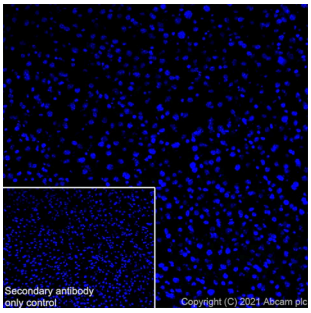
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Immunohistochemical analysis of paraffin-embedded Rat cerebellum tissue labelling Bassoon/BSN with ab283680 at 1/500 (1.122 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Cytoplasmic staining on rat cerebellum (PMID: 9679147). The section was incubated with ab283680 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

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Negative control: No staining on mouse liver is observed (PMID: 9679147).

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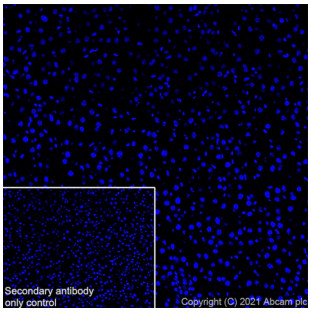
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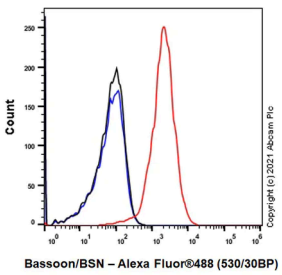
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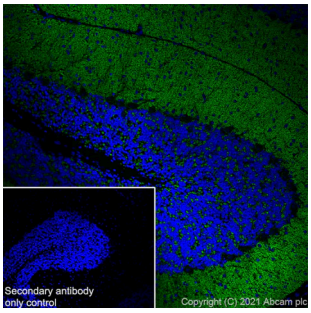
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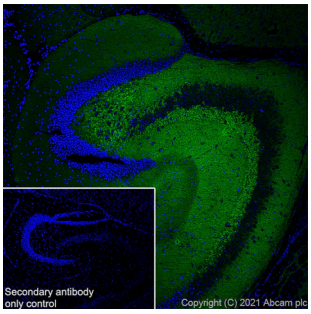


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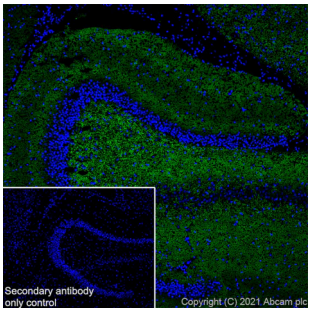


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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.