abcam

ab307130

Alexa Fluor® 488 Anti-Synapsin I antibody [EPR23531-50] - Synaptic Marker

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR23531-50
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-Fr

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Species	Rat
Dilution info	1/500
Notes	-

Predicted

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information Syn1

Function	Neuronal phosphoprotein that coats synaptic vesicles, and binds to the cytoskeleton. Acts as a regulator of synaptic vesicles trafficking, involved in the control of neurotransmitter release at the pre-synaptic terminal (By similarity). Also involved in the regulation of axon outgrowth and synaptogenesis (PubMed:7568107). The complex formed with NOS1 and CAPON proteins is necessary for specific nitric-oxide functions at a presynaptic level (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

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.

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Supplementary info

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

Activity summary	Synapsin I also known as SYN1 plays an important role in synaptic function. It is a phosphoprotein with a molecular mass of approximately 78 kDa. Synapsin I is expressed mainly in the neurons of the central nervous system (CNS). It binds to synaptic vesicles and actin cytoskeleton which suggests that it functions in modulating neurotransmitter release at the presynaptic terminals. This modulation occurs as synapsin I undergoes phosphorylation which is critical for its activity.
Biological function summary	Synapsin I influences synaptic plasticity and is part of the synaptic vesicle trafficking complex. In its dephosphorylated state Synapsin I associates with synaptic vesicles anchoring them to the actin cytoskeleton. Upon phosphorylation Synapsin I changes conformation causing vesicles to mobilize. This activity supports the modulation of neurotransmitter release impacting learning and memory functions.
Pathways	Synapsin I participates significantly in the neurotransmitter release cycle and synaptic vesicle trafficking pathway. Protein kinase A (PKA) and Ca2+/calmodulin-dependent protein kinase II (CaMKII) regulate its phosphorylation affecting how Synapsin I contributes to vesicle release. The phosphorylation of Synapsin I at sites

	such as serine 9 enables its interaction with other proteins like actin and spectrin facilitating vesicle movement.
Associated diseases and disorders	Altered Synapsin I expression associates with neurological conditions like epilepsy and schizophrenia. In epilepsy dysregulation of Synapsin I phosphorylation processes can result in imbalanced neurotransmitter release potentially leading to seizures. Its connection to schizophrenia involves changes in synaptic plasticity which neurotransmitter systems such as dopamine and related proteins like alpha-synuclein also influence. Understanding these interactions can aid in developing therapeutic strategies.

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

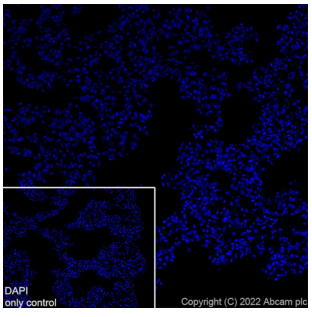
We do not recommend this combination. It is not covered by our product promise.

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.

5 product images

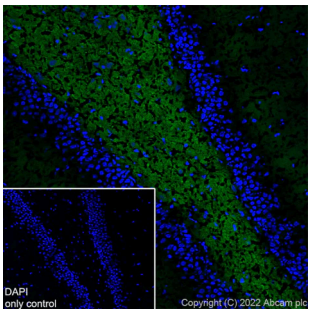


Immunohistochemistry (Frozen sections) - Alexa Fluor® 488 Anti-Synapsin I antibody [EPR23531-50] - Synaptic Marker (ab307130)

Synapsin I Immunohistochemistry (Frozen sections) staining of Rat lung (fresh) using rabbit Anti-Synapsin I antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat lung (fresh) tissue labeling Synaptic Marker with ab307130 at 1/500 (1.0 ug/ml) dilution (Green). Negative control: confocal image showing no staining on rat lung tissue (PMID: 9539796). The

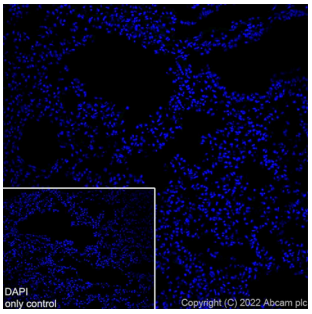
nuclear counterstain was DAPI (Blue). The section was incubated with ab307130 for 60mins at room temperature. The section was then mounted using Fluoromount®.The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). The nuclear counterstain was DAPI (Blue).



Immunohistochemistry (Frozen sections) - Alexa Fluor® 488 Anti-Synapsin I antibody [EPR23531-50] - Synaptic Marker (ab307130)

Synapsin I Immunohistochemistry (Frozen sections) staining of Rat hippocampus (fresh) using rabbit Anti-Synapsin I antibody

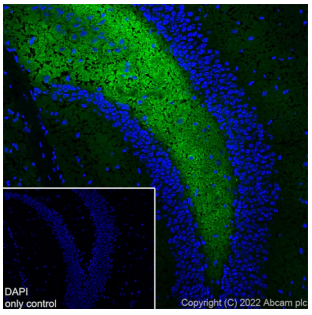
Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat hippocampus (fresh) tissue labeling Synaptic Marker with ab307130 at 1/500 (1.0 ug/ml) dilution (Green). Confocal image showing positive staining on rat hippocampus tissue. The nuclear counterstain was DAPI (Blue). The section was incubated with ab307130 for 60mins at room temperature. The section was then mounted using Fluoromount®.The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). The nuclear counterstain was DAPI (Blue).



Immunohistochemistry (Frozen sections) - Alexa Fluor® 488 Anti-Synapsin I antibody [EPR23531-50] - Synaptic Marker (ab307130)

Synapsin I Immunohistochemistry (Frozen sections) staining of Mouse lung (fresh) using rabbit Anti-Synapsin I antibody

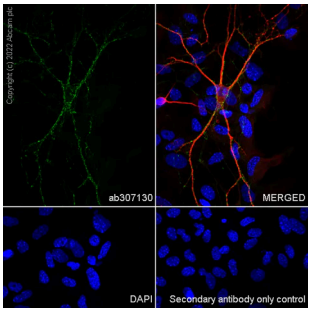
Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse lung (fresh) tissue labeling Synaptic Marker with ab307130 at 1/500 (1.0 ug/ml) dilution (Green). Negative control: confocal image showing no staining on mouse lung tissue (PMID: 9539796). The nuclear counterstain was DAPI (Blue). The section was incubated with ab307130 for 60mins at room temperature. The section was then mounted using Fluoromount®.The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). The nuclear counterstain was DAPI (Blue).



Immunohistochemistry (Frozen sections) - Alexa Fluor® 488 Anti-Synapsin I antibody [EPR23531-50] - Synaptic Marker (ab307130)

Synapsin I Immunohistochemistry (Frozen sections) staining of Mouse hippocampus (fresh) using rabbit Anti-Synapsin I antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse hippocampus (fresh) tissue labeling Synaptic Marker with ab307130 at 1/500 (1.0 ug/ml) dilution (Green). Confocal image showing positive staining on mouse hippocampus tissue. The nuclear counterstain was DAPI (Blue). The section was incubated with ab307130 for 60mins at room temperature. The section was then mounted using Fluoromount®.The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). The nuclear counterstain was DAPI (Blue).



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-Synapsin I antibody [EPR23531-50] - Synaptic Marker (ab307130)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized mouse primary neuron cells labelling Synaptic Marker with ab307130 at 1/50 (10.0 ug/ml) dilution (Green). Confocal image showing positive staining in mouse primary neuron.Confocal scanning Z step was set as 0.3 ¦Mm followed by image processing with maximum Z projection.Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). ab11267 Anti-MAP2 mouse monoclonal antibody was used to counterstain tubulin at 1/500 4ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue).

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