abcam

ab302627

Anti-SYT1 antibody [EPR24488-129]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR24488-129
Purification technique	Affinity purification Protein A
Concentration	0.482 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Rat, Mouse, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Species	Rat
Dilution info	1/500
Notes	-

Expected

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

ICC/IF

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Species	Rat
Dilution info	1/500
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Rat
Dilution info	1/50
Notes	-

Expected

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

Not recommended

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Tested

Species	Rat
Dilution info	1/20000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Human
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	-
Notes	

Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Target data

See full target information SYT1

Function	Calcium sensor that participates in triggering neurotransmitter release at the synapse (By similarity). May have a regulatory role in the membrane interactions during trafficking of synaptic vesicles at the active zone of the synapse (By similarity). It binds acidic phospholipids with a specificity that requires the presence of both an acidic head group and a diacyl backbone. A Ca(2+)-dependent interaction between synaptotagmin and putative receptors for activated protein kinase C has also been reported. It can bind to at least three additional proteins in a Ca(2+)-independent manner; these are neurexins, syntaxin and AP2. Plays a role in dendrite formation by melanocytes (PubMed:23999003).

Storage

Shipped at conditions	Conditional Ambient
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

Notes

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

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.

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

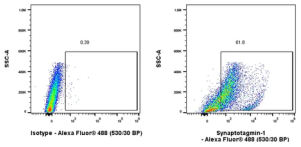
We do not recommend this combination. It is not covered by our product promise.

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.

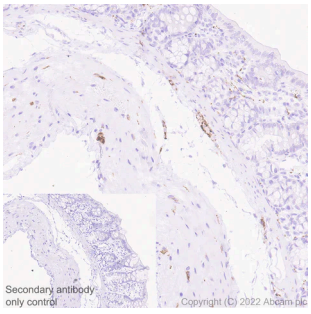
Full details and terms and conditions can be found here:
Terms & Conditions.

12 product images



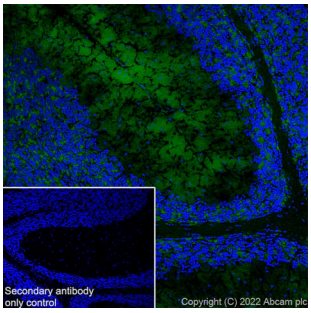
Flow Cytometry (Intracellular) - Anti-SYT1 antibody [EPR24488-129] (ab302627)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Mouse primary neuron cell cells labelling Synaptotagmin-1 with ab302627 at 1/50 dilution (1ug)/ Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SYT1 antibody [EPR24488-129] (ab302627)

Immunohistochemical analysis of paraffin-embedded Rat colon tissue labeling Synaptotagmin-1 with ab302627 at 1/20000 (0.024 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer). Positive staining on nerve plexus of rat colon. The section was incubated with ab302627 at 4°C overnight. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

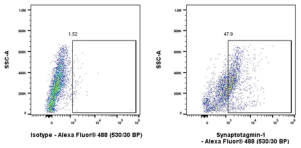


Immunohistochemistry (Frozen sections) - Anti-SYT1 antibody [EPR24488-129] (ab302627)

SYT1 Immunohistochemistry (Frozen sections) staining of Rat cerebellum (fresh) using rabbit Anti-SYT1 antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat cerebellum (fresh) tissue labeling Synaptotagmin-1 with ab302627 at 1/50 (9.64 ug/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/mL dilution (Green). Positive staining on rat cerebellum is observed. The nuclear counterstain was DAPI (Blue).

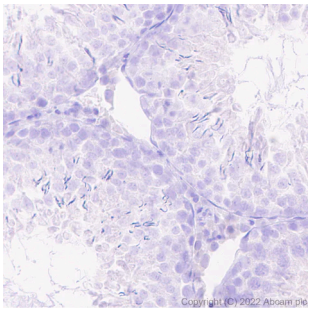
Secondary antibody control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbedat 1/1000 2 ug/mL dilution.



Flow Cytometry (Intracellular) - Anti-SYT1 antibody [EPR24488-129] (ab302627)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Rat primary neuron cell cells labelling Synaptotagmin-1 with ab302627 at 1/50 dilution (1ug)/ Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat

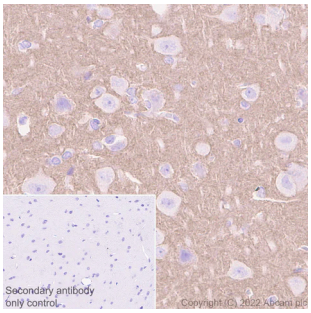
Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SYT1 antibody [EPR24488-129] (ab302627)

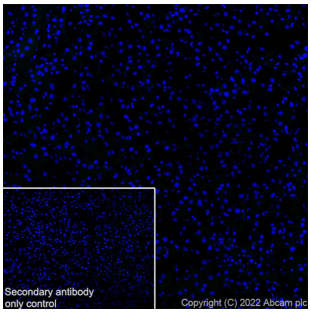
SYT1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Rat testis using rabbit Anti-SYT1 antibody

Immunohistochemical analysis of paraffin-embedded Rat testis tissue labeling Synaptotagmin-1 with ab302627 at 1/20000 (0.024 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer). Negative control: No staining on rat testis. The section was incubated with ab302627 at 4°C overnight. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SYT1 antibody [EPR24488-129] (ab302627)

Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labeling Synaptotagmin-1 with ab302627 at 1/20000 (0.024 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer). Positive staining on rat cerebrum (PMID: 17190793). The section was incubated with ab302627 at 4°C overnight. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

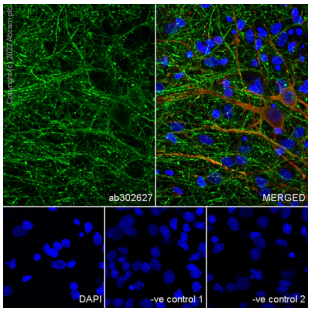


Immunohistochemistry (Frozen sections) - Anti-SYT1 antibody [EPR24488-129] (ab302627)

SYT1 Immunohistochemistry (Frozen sections) staining of Rat liver (fresh) using rabbit Anti-SYT1 antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat liver (fresh) tissue labeling Synaptotagmin-1 with ab302627 at 1/50 (9.64 ug/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/mL dilution (Green). Negative control: no staining on rat liver (PMID: 24510058) is observed. The nuclear counterstain was DAPI (Blue).

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

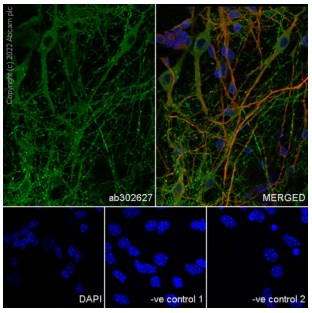


Immunocytochemistry/ Immunofluorescence - Anti-SYT1 antibody [EPR24488-129] (ab302627)

SYT1 Immunocytochemistry/ Immunofluorescence staining of rat primary neural/glia cell using rabbit Anti-SYT1 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized rat primary neural/glia cell cells labelling Synaptotagmin-1 with ab302627 at 1/500 (0.964 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing positive staining in rat primary

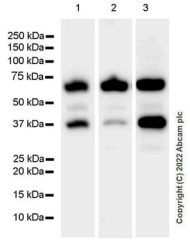
neural/glia cell.Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection is observed. ab11267 Anti-MAP2 mouse monoclonal antibody was used to counterstain tubulin at 1/500 4 ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



Immunocytochemistry/ Immunofluorescence - Anti-SYT1 antibody [EPR24488-129] (ab302627)

SYT1 Immunocytochemistry/ Immunofluorescence staining of mouse primary neural/glia cell using rabbit Anti-SYT1 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized mouse primary neural/glia cell cells labelling Synaptotagmin-1 with ab302627 at 1/500 (0.964 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing positive staining in mouse primary neural/glia cell.Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection is observed. ab11267 Anti-MAP2 mouse monoclonal antibody was used to counterstain tubulin at 1/500 4 ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



Western blot - Anti-SYT1 antibody [EPR24488-129] (ab302627)

Blocking and diluting buffer and concentration: 5% NFDM/TBST The bands beneath the target band at approximately 37 kDa are likely to be degraded target fragments. Exposure time: Lane 1: 1 second Lane 2-3: 7.75 seconds
All lanes:
Western blot - Anti-SYT1 antibody [EPR24488-129] (ab302627) at 1/1000 dilution

Lane 1:
Rat brain tissue lysate 20 µg

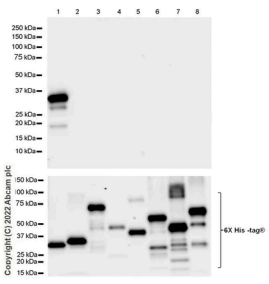
Lane 2:
Mouse spinal cord tissue lysate 20 µg

Lane 3:
Human cerebellum tissue lysate 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Observed band size: 60 kDa, 37 kDa



Western blot - Anti-SYT1 antibody [EPR24488-129] (ab302627)

Blocking and diluting buffer and concentration: 5% NFDM/TBST This antibody does not cross-react with mouse SYT2, SYT3, SYT4, SYT5, SYT6, SYT7, and SYT9. These rec proteins were all made in-house and extracted from E.coil expression systems. Exposure time: 15 seconds
All lanes:
Western blot - Anti-SYT1 antibody [EPR24488-129] (ab302627) at 1/1000 dilution

Lane 1:

His-tagged mouse recombinant protein SYT1 (aa137-421) (35 kDa)

Lane 2:
His-tagged mouse recombinant protein SYT2 (aa137-420) (34.8 kDa)

Lane 3:
His-tagged mouse recombinant protein SYT3 (aa 76-587) (56.9 kDa)

Lane 4:
His-tagged mouse recombinant protein SYT4 (aa 38-425) (45.6 kDa)

Lane 5:
His-tagged mouse recombinant protein SYT5 (aa 46-386) (40.4 kDa)

Lane 6:
His-tagged mouse recombinant protein SYT6 (aa 81-511) (51kDa)

Lane 7:
His-tagged mouse recombinant protein SYT7 (aa 38-403) (43.6 kDa)

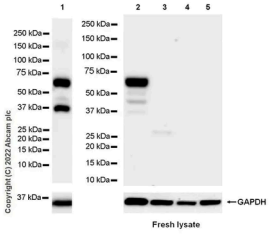
Lane 8:
His-tagged mouse recombinant protein SYT9 (aa 74-491) (50.2 kDa)

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 34.8 kDa, 56.9 kDa

Exposure time: 15s



Western blot - Anti-SYT1 antibody [EPR24488-129] (ab302627)

Blocking and diluting buffer and concentration: 5% NFDM/TBST Lysates of the right part (lane 2-5) were freshly made and used for Western blotting immediately to minimize protein degradation. The band beneath the target band at approximately 37 kDa is likely to be degraded target fragments. Negative controls: liver, testis, spleen (PMID:15561725, PMID:14715137) Exposure time: 15 seconds
All lanes:
Western blot - Anti-SYT1 antibody [EPR24488-129] (ab302627) at 1/1000 dilution

Lane 1:
Mouse brain tissue lysate 20 µg

Lane 2:
Mouse brain fresh tissue lysate 20 µg

Lane 3:
Mouse liver fresh tissue lysate 20 µg

Lane 4:
Mouse testis fresh tissue lysate 20 µg

Lane 5:
Mouse spleen fresh tissue lysate 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 60 kDa, 37 kDa

Exposure time: 15s

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