abcam

ab308617

Anti-Synaptogyrin 1 antibody [EPR25081-18]

Recombinant | RabMAb | KO Validated | 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	EPR25081-18
Purification technique	Affinity purification Protein A
Concentration	0.4985 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Recombinant fragment - Human
Dilution info	1/1000
Notes	-

Species	Human

Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/5000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/5000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/5000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

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

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Species	Rat
Dilution info	1/100
Notes	-

Expected

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

Not recommended

Species	Recombinant fragment - 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	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

IHC-Fr

Not recommended

Species	Mouse, Rat, Human, Recombinant fragment - Human
Dilution info	-

Notes	-

Target data

See full target information SYNGR1

Function	May play a role in regulated exocytosis. Modulates the localization of synaptophysin/SYP into synaptic-like microvesicles and may therefore play a role in synaptic-like microvesicle formation and/or maturation (By similarity). Involved in the regulation of short-term and long-term synaptic plasticity (By similarity).

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

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.

Supplementary info

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

Activity summary	Synaptogyrin 1 also known as SYG1 or Synaptogyrin-1 mechanically functions as an integral membrane protein involved in synaptic vesicle dynamics. It is a protein weighing approximately 29 kDa. Researchers have found SYG1 abundantly expressed within neural tissues particularly the presynaptic terminals of neurons. This protein shows involvement in the regulation of synaptic vesicle availability and neurotransmitter release implying its mechanical importance in synaptic function.
Biological function summary	Synaptogyrin 1 contributes to the modulation of synaptic vesicle cycling and neurotransmitter release. It participates in forming complexes that interact with other synaptic vesicle proteins likely supporting the organization and maintenance of synaptic vesicle pools. The presence of SYG1 in synaptic nerve terminals signifies its role in maintaining synaptic transmission efficiency and neuronal communication over synapses.
Pathways	Synaptogyrin 1 is linked to neurotransmission processes and synaptic vesicle recycling pathways. Researchers recognize its participation in the SNARE complex interplay important for vesicle fusion and neurotransmitter release. SYG1 associates with proteins like Synaptophysin and VAMP2 which all contribute to the maintenance of the synaptic vesicle life cycle ensuring proper communication between neurons.
Associated diseases and disorders	Synaptogyrin 1 relates to neurological conditions such as schizophrenia and epilepsy. Misexpression or dysfunction of SYG1 disrupts synaptic signal transmission contributing to these disorders. Studies have shown it is associated with proteins such as NRG1 and DISC1 implicated in schizophrenia as well as alterations in glutamatergic pathways linked to epilepsy. Understanding its interaction and regulation could offer insights into therapeutic strategies for synaptic dysfunction-related diseases.

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

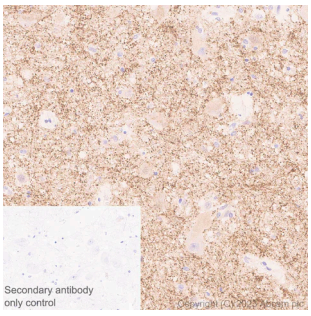
We do not recommend this combination. It is not covered by our product promise.

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.

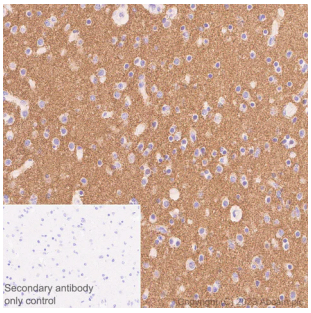
Full details and terms and conditions can be found here:
Terms & Conditions.

14 product images



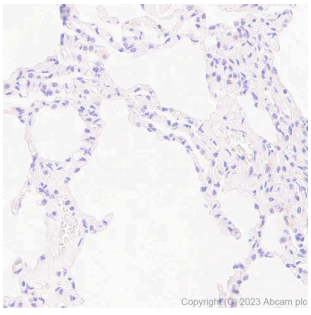
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

Immunohistochemical analysis of paraffin-embedded Human hypothalamus tissue labelling Synaptogyrin 1 with ab308617 at 1/5000 (0.1 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Cytoplasmic staining on human hypothalamus. The section was incubated with ab308617 for 10 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Incubate slides with 3% Hydrogen Peroxide for 10 mins at room temperature after secondary antibody incubation to reduce the background. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



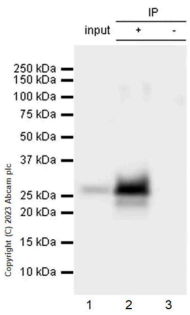
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labelling Synaptogyrin 1 with ab308617 at 1/5000 (0.1 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Cytoplasmic staining on human cerebrum (PMID: 10595519). The section was incubated with ab308617 for 10 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Incubate slides with 3% Hydrogen Peroxide for 10 mins at room temperature after secondary antibody incubation to reduce the background. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

Immunohistochemical analysis of paraffin-embedded Human lung tissue labelling Synaptogyrin 1 with ab308617 at 1/5000 (0.1 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: No staining on human lung. The section was incubated with ab308617 for 10 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Incubate slides with 3% Hydrogen Peroxide for 10 mins at room temperature after secondary antibody incubation to reduce the background. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunoprecipitation - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

Synaptogyrin 1 was immunoprecipitated from 0.35 mg Human hypothalamus tissue lysate with ab308617 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab308617 at 1/1000 dilution. VeriBlot for IP secondary antibody (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: Human hypothalamus tissue lysate
Lane 2: ab308617 IP in Human hypothalamus tissue lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab308617 in human hypothalamus tissue lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 1 second

All lanes:
Immunoprecipitation - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617) at 1/1000 dilution

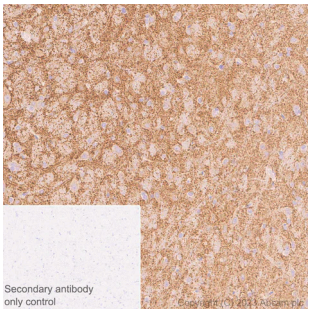
All lanes:
Human hypothalamus tissue lysate at 10 µg

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Observed band size: 26 kDa

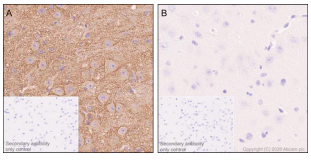
Exposure time: 1s



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labelling Synaptogyrin 1 with ab308617 at 1/5000 (0.1 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Cytoplasmic staining on rat cerebrum (PMID: 9446595). The section was incubated with ab308617 for 10 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Incubate slides with 3% Hydrogen Peroxide for 10 mins at room temperature after secondary antibody incubation to reduce the background. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins

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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

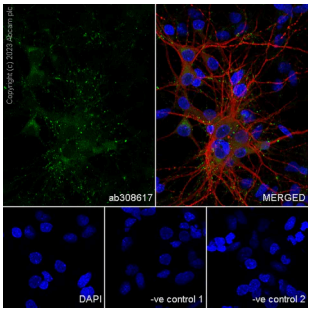
Synaptogyrin 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Synaptogyrin 1 antibody

Immunohistochemical analysis of paraffin-embedded (A) Cerebrum tissue from wild-type C57BL/6JGpt mice (B) Cerebrum tissue from Syngr1 knockout mice labeling Synaptogyrin 1 with ab308617 at 1/5000 dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on (A) Cerebrum tissue from wild-type C57BL/6JGpt mice and no staining on (B) Cerebrum tissue from Syngr1 knockout mice.
The primary antibody was incubated for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.
The tissue samples were kindly provided by GemPharmatech. C57BL/6JGpt wildtype mice and Syngr1-KO homozygous mice (Strain ID: T017004).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins

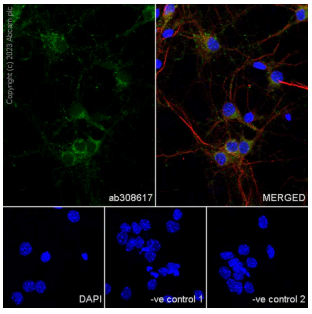
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Immunocytochemistry/ Immunofluorescence - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

Synaptogyrin 1 Immunocytochemistry/ Immunofluorescence staining of rat primary neural/glia cell using rabbit Anti-Synaptogyrin 1 antibody

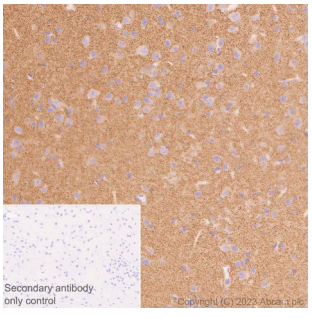
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized rat primary neural/glia cell cells labelling Synaptogyrin 1 with ab308617 at 1/100 (4.985 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (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. 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). 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-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

Synaptogyrin 1 Immunocytochemistry/ Immunofluorescence staining of mouse primary neural/glia cell using rabbit Anti-Synaptogyrin 1 antibody

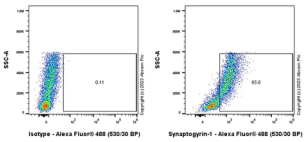
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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

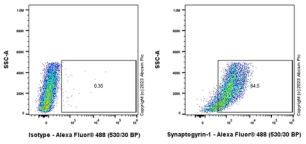
Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labelling Synaptogyrin 1 with ab308617 at 1/5000 (0.1 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Cytoplasmic staining on mouse cerebrum.The section was incubated with ab308617 for 10 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Incubate slides with 3% Hydrogen Peroxide for 10 mins at room temperature after secondary antibody incubation to reduce the background. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a

ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



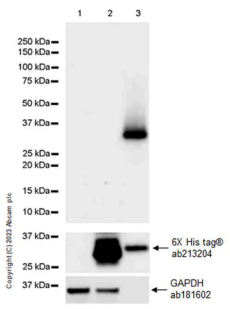
Flow Cytometry (Intracellular) - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Rat primary neuron cells labelling Synaptogyrin 1 with ab308617 at 1/500 dilution (0.1 ug)/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 1/5000 dilution was used as the secondary antibody.



Flow Cytometry (Intracellular) - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Mouse primary neuron cells labelling Synaptogyrin 1 with ab308617 at 1/500 dilution (0.1 ug)/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 1/5000 dilution was used as the secondary antibody.



Western blot - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

Blocking and diluting buffer and concentration: 5% NFDM/TBST. This antibody does not cross-react with human Synaptogyrin 2. In Western blot, anti-His antibody (ab213204) staining at 1/5000 dilution, anti-GAPDH antibody (ab181602) loading control staining at 1/200, 000 dilution. Exposure time: 10 seconds
All lanes:
Western blot - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617) at 1/1000 dilution

Lane 1:
HEK-293 (human embryonic kidney) transfected with an empty vector (vector control), containing a myc-His-tag®, whole cell lysate at 20 µg

Lane 2:
HEK-293 transfected with human Synaptogyrin 2 (WT) expression vector containing a myc-His-tag®, whole cell lysate at 20 µg

Lane 3:
His-tagged human Synaptogyrin 1 fragment at 10 ng

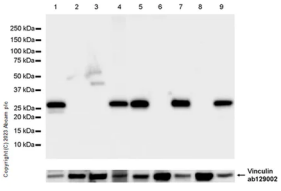
Secondary

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

Predicted band size: 25 kDa

Observed band size: 30 kDa

Exposure time: 10s



Western blot - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

Synaptogyrin 1 Western blot staining using rabbit Anti-Synaptogyrin 1 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST. Negative control: lung, liver (PMID: 9446595). In Western blot, anti- Vinculin antibody (ab129002) loading control staining at 1/10, 000 dilution. Exposure time: 3 seconds
All lanes:
Western blot - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617) at 1/1000 dilution

Lane 1:
Human hypothalamus tissue lysate at 20 µg

Lane 2:
Human lung tissue lysate at 20 µg

Lane 3:
Human liver tissue lysate at 20 µg

Lane 4:
Mouse brain tissue lysate at 20 µg

Lane 5:
Mouse hypothalamus tissue lysate at 20 µg

Lane 6:
Mouse lung tissue lysate at 20 µg

Lane 7:
Rat brain tissue lysate at 20 µg

Lane 8:
Rat lung tissue lysate at 20 µg

Lane 9:
Rat hypothalamus tissue lysate at 20 µg

Secondary

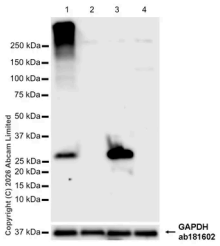
Lanes 1 - 9:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/2000 dilution

Lanes 1 - 9:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/20000 dilution

Predicted band size: 25 kDa

Observed band size: 26 kDa

Exposure time: 3s



Western blot - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617)

Synaptogyrin 1 Western blot staining using rabbit Anti-Synaptogyrin 1 antibody

In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

The tissue samples were kindly provided by GemPharmatech. C57BL/6JGpt wildtype mice and Syngr1-KO homozygous mice (Strain ID: T017004). Samples are non-boiled as boiling may cause protein aggregation.

All lanes:
Western blot - Anti-Synaptogyrin 1 antibody [EPR25081-18] (ab308617) at 1/1000 dilution

Lane 1:
Wild-type mouse cerebrum tissue lysate (male) at 20 µg

Lane 2:
Syngr1 knockout mouse cerebrum tissue lysate (male) at 20 µg

Lane 3:
Wild-type mouse hypothalamus tissue lysate (male) at 20 µg

Lane 4:
Syngr1 knockout mouse hypothalamus tissue lysate (male) at 20 µg

Secondary

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

Observed band size: 25 kDa, 36 kDa

Exposure time: 26s

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