abcam

ab171355

Anti-SNAP25 antibody [EPR3275] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR3275
Purification technique	Affinity purification Protein A
Concentration	0.973 - 1.021 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	-

Notes	Can be blocked with ab183131

Species	Rat
Dilution info	-
Notes	Can be blocked with ab183131

Species	Human
Dilution info	-
Notes	Can be blocked with ab183131

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab199376-Rabbit monoclonal IgG (Low endotoxin, Azide free), is suitable for use as an isotype control with this antibody.

Expected

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

Notes	-

Target data

See full target information SNAP25

Function	t-SNARE involved in the molecular regulation of neurotransmitter release. May play an important role in the synaptic function of specific neuronal systems. Associates with proteins involved in vesicle docking and membrane fusion. Regulates plasma membrane recycling through its interaction with CENPF. Modulates the gating characteristics of the delayed rectifier voltage-dependent potassium channel KCNB1 in pancreatic beta cells.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab171355 is the carrier-free version of ab109105.
We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

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	SNAP25 also known as Synaptosomal-associated protein 25 plays a critical role in neurotransmitter release through its involvement in the vesicle fusion process. It is part of the SNARE complex and is essential for the docking and fusion of synaptic vesicles with the presynaptic membrane. The protein is approximately 25 kDa in mass and is expressed abundantly in neurons within the central nervous system. Among its various synonyms you may encounter 'protein SNAP' in some literature.
Biological function summary	SNARE proteins mediate the fusion of transport vesicles with their target membranes. SNAP25 as part of this complex facilitates synaptic-vesicle exocytosis by forming a tight complex with syntaxin and VAMP (also called synaptobrevin). This interaction promotes the merging of vesicle and plasma membranes enabling efficient neurotransmitter release into the synaptic cleft. SNAP25 undergoes dynamic regulation and modification which is important for precise synaptic function.
Pathways	One observes SNAP25's integration in the process of neurotransmitter release specifically in the exocytosis pathway. It associates closely with other SNARE proteins such as syntaxin-1 and VAMP-2 embodying a core element in synaptic signaling mechanisms. The proper functioning of SNAP25 within this pathway assures the controlled release of neurotransmitters influencing synaptic plasticity and communication.
Associated diseases and disorders	SNAP25 exhibits strong associations with conditions such as Attention Deficit Hyperactivity Disorder (ADHD) and epilepsy. Variants and dysregulation in SNAP25 have been linked to problems in synaptic transmission which can contribute to these neurological disorders. The protein also interacts with other SNARE complex proteins such as syntaxin which can potentially mediate its role in disease pathogenesis. Understanding these interactions offers insights into therapeutic targets for neurological disorders involving SNAP25.

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

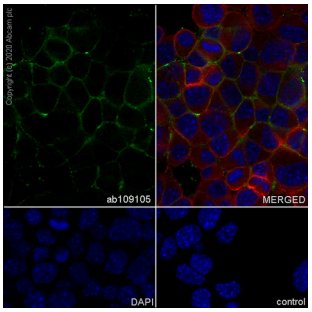
We do not recommend this combination. It is not covered by our product promise.

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.

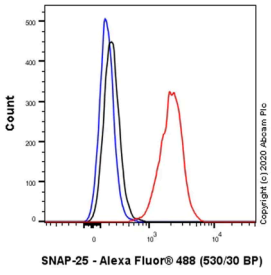
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-SNAP25 antibody [EPR3275] - BSA and Azide free (ab171355)

SNAP25 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SNAP25 antibody

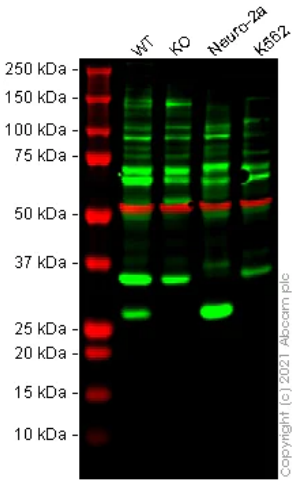
Immunocytochemistry analysis of Neuro-2a(Mouse neuroblastoma neuroblast) cells labeling SNAP25 with Purified ab109105 at 1/250 dilution (8.9 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
This data was developed using ab109105, the same antibody clone in a different buffer formulation.



Flow Cytometry (Intracellular) - Anti-SNAP25 antibody [EPR3275] - BSA and Azide free (ab171355)

SNAP25 Flow Cytometry (Intracellular) staining using rabbit Anti-SNAP25 antibody

Flow Cytometry analysis of Neuro-2a(Mouse neuroblastoma neuroblast) cells labelling SNAP25 with Purified ab109105 at 1:200 dilution (10 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor™ 488, ab150077) secondary antibody was used at 1:2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (Blue).
This data was developed using ab109105, the same antibody clone in a different buffer formulation.



Western blot - Anti-SNAP25 antibody [EPR3275] - BSA and Azide free (ab171355)

SNAP25 Western blot staining using rabbit Anti-SNAP25 antibody

False colour image of Western blot: Anti-SNAP25 antibody [EPR3275] staining at 1/1000 dilution, shown in green; loading control ab7291 (Mouse anti-Alpha Tubulin [DM1A]) staining at 1/20000 dilution, shown in red. In Western blot, ab109105 was shown to bind specifically to SNAP25. A band was observed at 27 kDa in wild-type SH-SY5Y cell lysates with no signal observed at this size in SNAP25 knockout cell line ab280041 (knockout cell lysate ab280100). To generate this image, wild-type and SNAP25 knockout SH-SY5Y cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) at 1/20000 dilution.
This data was developed using ab109105, the same antibody clone in a different buffer formulation.

All lanes:
Western blot - Anti-SNAP25 antibody [EPR3275] (ab109105) at 1/1000 dilution

Lane 1:
Wild-type SH-SY5Y cell lysate at 20 µg

Lane 2:
SNAP25 knockout SH-SY5Y cell lysate at 20 µg

Lane 2:
Western blot - Human SNAP25 knockout SH-SY5Y cell line (ab280041)

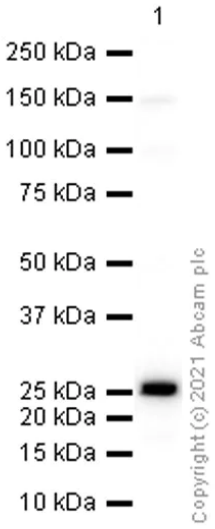
Lane 3:
Neuro-2a cell lysate at 20 µg

Lane 4:
K562 cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 23 kDa

Observed band size: 27 kDa



Western blot - Anti-SNAP25 antibody [EPR3275] - BSA and Azide free (ab171355)

SNAP25 Western blot staining of Human brain lysate using rabbit Anti-SNAP25 antibody

This data was developed using ab109105, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-SNAP25 antibody [EPR3275] (ab109105) at 1/1000 dilution

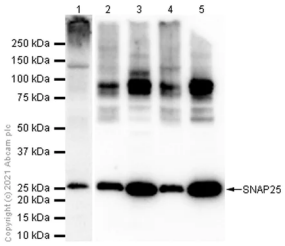
All lanes:
Human brain lysate at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 23 kDa

Observed band size: 25 kDa



Western blot - Anti-SNAP25 antibody [EPR3275] - BSA and Azide free (ab171355)

SNAP25 Western blot staining using rabbit Anti-SNAP25 antibody

This data was developed using ab109105, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-SNAP25 antibody [EPR3275] (ab109105) at 1/1000 dilution

Lane 1:
Neuro-2a (Mouse neuroblastoma neuroblast) whole cell lysate at 20 µg

Lane 2:
Mouse brain lysate at 20 µg

Lane 3:
Mouse hippocampus lysate at 20 µg

Lane 4:
Rat brain lysate at 20 µg

Lane 5:
Rat hippocampus lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 23 kDa

Observed band size: 25 kDa

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