abcam

ab5666

Anti-SNAP25 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS, 0.1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Mouse Snap25 aa 150-250. The exact immunogen used to generate this antibody is proprietary information. Database link P60879
Purification technique	Affinity purification Immunogen
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC

Tested

Species	Rat
Dilution info	1/100
Notes	-

Expected

Species	Mouse

Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Human, Chimpanzee, Rhesus monkey, Goldfish
Dilution info	-
Notes	-

Flow Cyt

Expected

Species	Mouse
Dilution info	for 10^6 Cells
Notes	-

Species	Rat
Dilution info	for 10^6 Cells
Notes	-

Predicted

Species	Human, Chimpanzee, Rhesus monkey, Goldfish
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	0.5-2 µg/mL
Notes	-

Expected

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

Predicted

Species	Human, Chimpanzee, Rhesus monkey, Goldfish
Dilution info	-
Notes	-

Target data

See full target information Snap25

Function	t-SNARE involved in the molecular regulation of neurotransmitter release (PubMed:8103915, PubMed:8243676). 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 (PubMed:16672379). Modulates the gating characteristics of the delayed rectifier voltage-dependent potassium channel KCNB1 in pancreatic beta cells (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

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

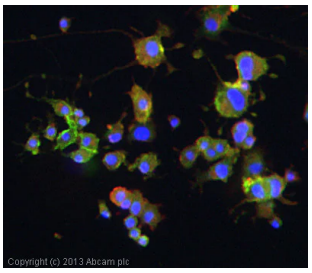
We do not recommend this combination. It is not covered by our product promise.

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.

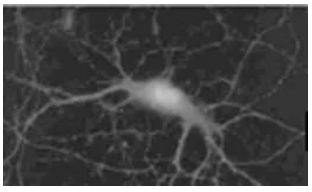
4 product images



Immunocytochemistry - Anti-SNAP25 antibody (ab5666)

SNAP25 Immunocytochemistry staining using rabbit Anti-SNAP25 antibody

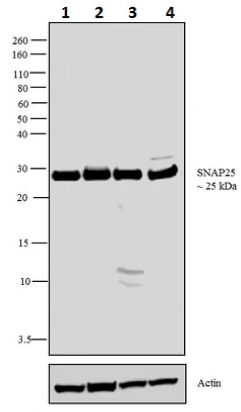
ICC/IF image of ab5666 stained PC12 cells. The cells were 4% paraformaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab5666, 5µg/ml) overnight at +4°C. The secondary antibody (green) was ab96899, DyLight® 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Immunocytochemistry - Anti-SNAP25 antibody (ab5666)

SNAP25 Immunocytochemistry staining using rabbit Anti-SNAP25 antibody

Immunlocalization of SNAP-25 in cultured rat hippocampal cells using ab5666.



Western blot - Anti-SNAP25 antibody (ab5666)

All lanes:
Western blot - Anti-SNAP25 antibody (ab5666)

Lane 1:
Mouse cerebellum at 30 µg

Lane 2:
Mouse brain at 30 µg

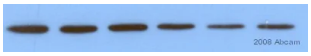
Lane 3:
Rat brain at 30 µg

Lane 4:
Membrane enriched extract at 30 µg

Secondary

All lanes:
Goat anti-Rabbit IgG (H+L) Secondary Antibody, HRP conjugate

Predicted band size: 23 kDa



This image is courtesy of an anonymous customer review

Western blot - Anti-SNAP25 antibody (ab5666)

SNAP25 Western blot staining of Whole tissue lysate prepared from mouse hippocampus using rabbit Anti-SNAP25 antibody

All lanes:
Western blot - Anti-SNAP25 antibody (ab5666) at 1/10000 dilution

All lanes:
Whole tissue lysate prepared from mouse hippocampus

Secondary

All lanes:
HRP conjugated goat anti-rabbit Ig at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 23 kDa

Observed band size: 25 kDa

Exposure time: 20s

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