

## Anti-SNAP25 Antibody Picoband™

Catalog Number: A01625

### About SNAP25

Synaptosome-associated protein of 25,000 daltons, also known as SNAP-25, is a protein which in humans encodes a 25-kD protein of 206 amino acids. It was first investigated as a neuron-specific gene preferentially expressed in mouse hippocampus. The tSNARE (the target-membrane soluble NSF-attachment protein receptor, where NSF is N-ethylmaleimide-sensitive fusion protein) synaptosomal-associated protein of 25 kDa (SNAP-25) is expressed in pancreatic B-cells and its cleavage by botulinum neurotoxin E (BoNT/E) abolishes stimulated secretion of insulin. In the nervous system, two SNAP-25 isoforms (a and b) have been described, which are produced by alternative splicing. It is identified mammalian Snap25a and Snap25b as targets of protein kinase A, a key regulator of neurosecretion that primes slowly releasable pools and readily releasable pools of secretory vesicles. SNAP-25 inhibits P/Q- and L-type voltage-gated calcium channels located presynaptically and interacts with the synaptotagmin C2B domain in Ca<sup>2+</sup>-independent fashion. In glutamatergic synapses SNAP-25 decreases the Ca<sup>2+</sup> responsiveness, while it is naturally absent in GABAergic synapses.

### Overview

|                      |                                                                                                                                                                                                       |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name         | Anti-SNAP25 Antibody Picoband™                                                                                                                                                                        |
| Reactive Species     | Human, Mouse, Rat                                                                                                                                                                                     |
| Description          | Boster Bio Anti-SNAP25 Antibody Picoband™ catalog # A01625. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.                              |
| Application          | ELISA, Flow Cytometry, IF, IHC, ICC, WB                                                                                                                                                               |
| Clonality            | Polyclonal                                                                                                                                                                                            |
| Formulation          | Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .                                                                                      |
| Storage Instructions | Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles. |
| Host                 | Rabbit                                                                                                                                                                                                |
| Uniprot ID           | P60880                                                                                                                                                                                                |

### Technical Details

|                               |                                                                                                                                                                                          |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Immunogen                     | E. coli-derived human SNAP25 recombinant protein (Position:M1-L203).                                                                                                                     |
| Predicted Reactive Species    | Human                                                                                                                                                                                    |
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC. |
| Cross Reactivity              | No cross-reactivity with other proteins.                                                                                                                                                 |
| Isotype                       | Rabbit IgG                                                                                                                                                                               |

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Form                | Lyophilized                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Concentration       | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Purification        | Immunogen affinity purified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Suggested Dilutions | <p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml</p> <p>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml</p> <p>Immunocytochemistry/Immunofluorescence, 5ug/ml</p> <p>Flow Cytometry, 1-3ug/1x10<sup>6</sup> cells</p> <p>Direct ELISA, 0.1-0.5ug/ml</p> |

## Anti-SNAP25 Antibody Picoband™ (A01625) Images

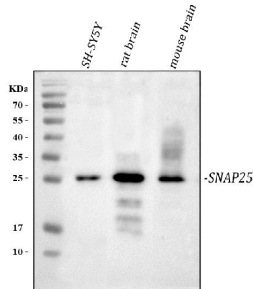


Figure 1. Western blot analysis of SNAP25 using anti-SNAP25 antibody (A01625).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human SH-SY5Y whole cell lysates,

Lane 2: rat brain tissue lysates,

Lane 3: mouse brain tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SNAP25 antigen affinity purified polyclonal antibody (Catalog # A01625) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for SNAP25 at approximately 25 kDa. The expected band size for SNAP25 is at 23 kDa.

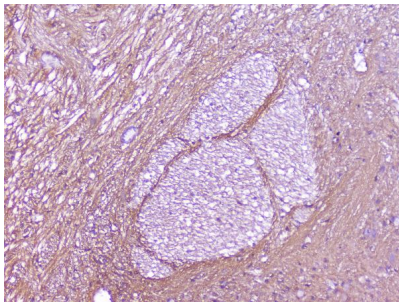


Figure 2. IHC analysis of SNAP25 using anti-SNAP25 antibody (A01625).

SNAP25 was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-SNAP25 Antibody (A01625) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

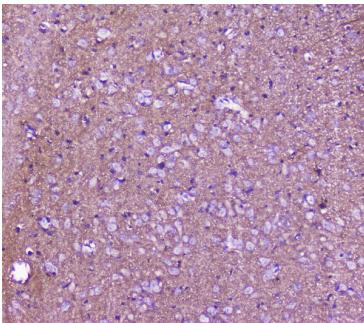
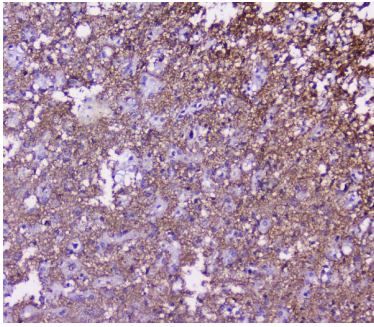


Figure 3. IHC analysis of SNAP25 using anti-SNAP25 antibody (A01625).

SNAP25 was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-SNAP25 Antibody (A01625) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

Figure 4. IHC analysis of SNAP25 using anti-SNAP25 antibody



(A01625). SNAP25 was detected in paraffin-embedded section of human glioma tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-SNAP25 Antibody (A01625) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

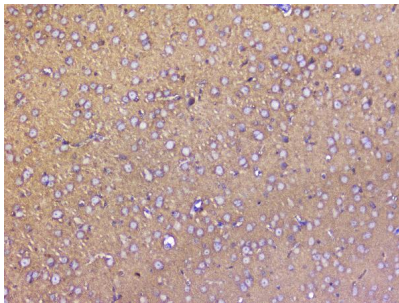


Figure 5. IHC analysis of SNAP25 using anti-SNAP25 antibody (A01625).

SNAP25 was detected in paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-SNAP25 Antibody (A01625) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

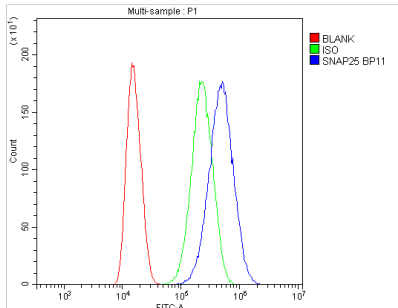


Figure 6. Flow Cytometry analysis of U87 cells using anti-SNAP25 antibody (A01625).

Overlay histogram showing U87 cells stained with A01625 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-SNAP25 Antibody (A01625, 1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

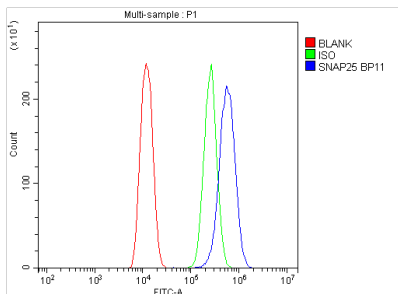
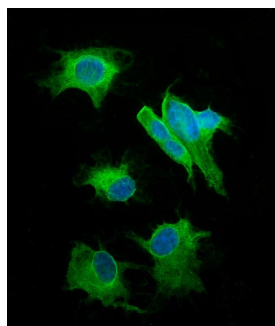


Figure 7. Flow Cytometry analysis of U20S cells using anti-SNAP25 antibody (A01625).

Overlay histogram showing U20S cells stained with A01625 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-SNAP25 Antibody (A01625, 1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Figure 8. IF analysis of SNAP25 using anti-SNAP25 antibody (A01625).

SNAP25 was detected in immunocytochemical section of SH-SY5Y cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins.



The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-SNAP25 Antibody (A01625) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

## 4 Publications Citing This Product

1. PubMed ID: 10.1016/j.tox.2017.03.021, Disruption of glutamate neurotransmitter transmission is modulated by SNAP-25 in benzo[a]pyrene-induced neurotoxic effects
2. PubMed ID: 10.1080/00207454.2017.1387115, Effects of spontaneous recurrent seizures on cognitive function via modulation of SNAREs expression
3. PubMed ID: 32930942, Guan Y,Chen X,Zhao B,Shi Y,Han F.What Happened in the Hippocampal Axon in a Rat Model of Posttraumatic Stress Disorder.Cell Mol Neurobiol.2020 Sep 15.doi:10.1007/s10571-020-00960-w.Epub ahead of print.PMID:32930942.

Visit [bosterbio.com/anti-snap25-picoband-trade-antibody-a01625-boster.html](https://www.bosterbio.com/anti-snap25-picoband-trade-antibody-a01625-boster.html) to see all 4 publications.

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