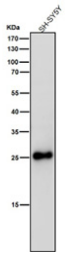
SNAP25 Antibody / Synaptosomal-associated protein 25 kDa [clone 32S42] (FY12232)

Catalog No.	Formulation	Size
FY12232	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	32S42
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P60880
Applications	Western blot: 1:500-1:2000 Immunohistochemistry: 1:50-1:200
Limitations	This SNAP25 antibody is available for research use only.



All lanes use the SNAP25 antibody at 1:3K dilution for 1 hour at room temperature.

Description

SNAP25 antibody detects synaptosomal-associated protein 25 kDa, a t-SNARE protein critical for synaptic vesicle

exocytosis and neurotransmitter release. SNAP25 is anchored to the plasma membrane and forms a ternary SNARE complex with syntaxin and synaptobrevin, which drives vesicle fusion and release of neurotransmitters into the synaptic cleft. This protein is enriched in neurons, especially presynaptic terminals, where it enables rapid and regulated neurotransmission.

Research using SNAP25 antibody highlights its central role in neuronal communication. Knockout mice lacking SNAP25 fail to release neurotransmitters and die at birth, emphasizing its indispensability. Partial loss of function leads to synaptic transmission defects, altered plasticity, and behavioral abnormalities. In humans, mutations in SNAP25 are associated with epilepsy, intellectual disability, and autism spectrum disorders, underscoring its neurological importance.

In disease research, SNAP25 dysregulation has been linked to schizophrenia, ADHD, and neurodegenerative diseases. Altered SNAP25 expression affects synaptic plasticity and cognitive performance. In Parkinson's disease, reduced SNAP25 activity impairs dopamine release, while in Alzheimer's disease, synaptic dysfunction correlates with disrupted SNARE complex assembly.

SNAP25 also plays roles outside the nervous system. In endocrine cells, it regulates hormone exocytosis, including insulin release from pancreatic beta cells. Dysregulation in this context links SNAP25 to diabetes and metabolic disorders.

As a therapeutic target, SNAP25 has been exploited in treatments such as botulinum neurotoxin, which cleaves SNAP25 and blocks neurotransmitter release, producing muscle relaxation. SNAP25 expression levels are also studied as biomarkers of synaptic integrity in aging and disease.

Antibodies against SNAP25 are validated for immunohistochemistry, immunofluorescence, western blot, and ELISA. These reagents provide robust detection of presynaptic proteins, enabling study of neuronal connectivity, disease mechanisms, and therapeutic interventions. Clone-based antibodies ensure specificity across tissues and experimental models.

For additional reagents and information on this neuronal SNARE protein, visit our SNAP25 Antibody / Synaptic Vesicle Fusion Protein page.

Application Notes

Optimal dilution of the SNAP25 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human SNAP25 was used as the immunogen for the SNAP25 antibody.

Storage

Store the SNAP25 antibody at -20oC.

Copyright © NSJ Bioreagents. All rights reserved.