

PRODUCT INFORMATION



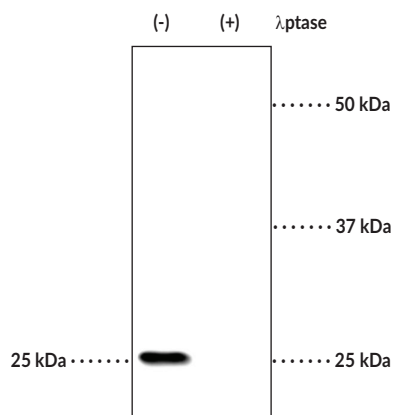
SNAP-25 (Phospho-Ser¹⁸⁷) Polyclonal Antibody

Item No. 29294

Overview and Properties

Contents:	This vial contains 100 µl of affinity-purified rabbit polyclonal antibody.
Synonyms:	SUP Antibody, Super Protein Antibody, Synaptosomal-associated 25 kDa Protein Antibody
Immunogen:	Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser ¹⁸⁷ of rat SNAP-25
Molecular Weight:	~25 kDa
Species Reactivity:	(+) Mouse, rat
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	10 mM HEPES, pH 7.5, with 150 mM sodium chloride, 100 µg/ml BSA, and 50% glycerol
Host:	Rabbit
Applications:	Western blot (WB); the recommended starting dilution is 1:1,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



(-): WB of rat hippocampal lysate showing specific immunolabeling of the ~25 kDa SNAP-25 phosphorylated at Ser¹⁸⁷.
(+): Phosphospecificity is shown where the immunolabeling is completely eliminated by lysate treatment with λ . phosphatase (λ .ptase, 400 units/100 µl lysate for 30 min., room temperature).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Synaptosomal-associated protein 25 (SNAP-25) is a member of the SNARE complex, which also includes syntaxin and VAMP, that is responsible for fusing synaptic vesicles with the presynaptic plasma membrane to facilitate neurotransmitter release.¹ Two SNAP-25 isoforms, SNAP-25a and SNAP-25b, are generated through alternative splicing, with SNAP-25b expressed only during the postnatal period and as the predominant isoform in the brain.² SNAP-25 contains two α helices, as well as one large and several smaller intrinsically disordered domains.¹ SNAP-25 is located primarily on the intracellular side of the presynaptic plasma membrane in neurons and interacts with a variety of proteins to orchestrate vesicle fusion in a calcium-triggered manner and to mediate spine development.¹ It is also found in the pancreas, enteroendocrine cells, and the chromaffin cells of the adrenal medulla where it is involved in hormone secretion.² SNAP-25 can be phosphorylated at serine 187 (Ser¹⁸⁷) in a neuronal activity-dependent manner by PKC, a modification that increases the rate of synaptic vesicle recruitment and is essential for SNAP-25b inhibition of voltage-gated calcium channels (VGCCs) and incorporation of NMDA receptors into the postsynaptic membrane.³⁻⁵ Phosphorylation at Ser¹⁸⁷ also facilitates neurotransmitter release and inhibits presynaptic short-term plasticity via regulation of synaptic vesicle dynamics.⁶ A point mutation at Ser¹⁸⁷ (S187A) induces anxiety-like behavior in mice homozygous for the mutation and induces working memory deficits and an immature phenotype in hippocampal dentate granule cells of adult mice heterozygous for the mutation.^{7,8} Cayman's SNAP-25 (Phospho-Ser¹⁸⁷) Polyclonal Antibody can be used for Western blot (WB) applications. The antibody recognizes SNAP-25 (phospho-Ser¹⁸⁷) at approximately 25 kDa from mouse and rat samples.

References

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