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# ProductInformation

**ANTI-SNAP-25**
Developed in Rabbit,
IgG Fraction of Antiserum

Product Number **S9684**

## Product Description

Anti-SNAP-25 is developed in rabbit using a synthetic peptide (NELEEMQRRADQLADESLEST-K) corresponding to the N-terminus of human SNAP-25 (amino acids 9-29 with C-terminally added lysine) conjugated to KLH as immunogen. This sequence is identical in SNAP-25 alternatively spliced forms SNAP-25A and SNAP-25B, in mouse, rat and chicken SNAP-25 and highly conserved (80-85%) in goldfish and zebrafish SNAP-25. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins.

Anti-SNAP-25 recognizes mouse SNAP-25 (25 kD). The antibody cross-reacts with rat SNAP-25. Applications include the detection and localization of SNAP-25 (25 kDa) by immunoblotting and immunohistochemistry. Staining of SNAP-25 in immunoblotting is specifically inhibited with SNAP-25 immunizing peptide (SNAP-25, mouse, amino acids 9-29 with C-terminally added lysine).

SNAP-25 (Synaptosome-associated protein of 25 kDa) is a membrane bound, presynaptic nerve terminal protein, that plays an essential role in synaptic vesicle fusion and exocytosis.[1-3] The molecular events leading to neurotransmitter release in the synaptic cleft are complex, involving multiple interacting proteins, generically termed SNAP receptors (SNAREs).[3-6] It has been suggested that SNAP-25 and syntaxin on the neuronal plasma membrane (t-SNARE) and synaptobrevin/VAMP on the synaptic vesicle (v-SNARE) form a stable ternary complex.[7] This core complex serves as a docking complex for two additional membrane fusion proteins, β-SNAP and NSF. ATP hydrolysis by NSF causes dissociation of the complex during priming of the exocytosis machinery. SNAP-25 induced reassembly and interaction with synaptotagmin (Syt), is thought to drive the $Ca^{2+}$-triggered vesicle-plasma membrane fusion and exocytosis. SNAP-25 has a key role in both developing and mature neurons.

During development, SNAP-25 expression correlates with synaptogenesis, axonal growth and neuronal maturation and is found mainly in cell bodies of neonatal brain.[2,3,8,9] In the adult nervous system, SNAP-25 is localized to presynaptic nerve terminals where it is conveyed by fast axonal transport.[1,10,11] SNAP-25 consists of two alternatively spliced isoforms SNAP-25a and SNAP-25b, differentially expressed in neurons and neuroendocrine cells.[12] SNAP-25a and SNAP-25b differ by nine amino acids in the central domain. Two of these residues alter the relative positioning of clustered cysteine residues that are required for post-translational palmitoylation implicated in membrane anchoring,[10] suggesting that the two SNAP-25 isoforms may play distinct roles in vesicular fusion events.

## Reagents

Anti-SNAP-25 is supplied as an IgG fraction of antiserum in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

## Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

## Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

**Product Profile**

A minimum working dilution of 1:5,000 is determined by immunoblotting using a cytosolic fraction of mouse brain extract.

A minimum working dilution of 1:10,000 is determined by immunoblotting using a whole cell extract of the rat pheochromocytoma PC-12 cell line.

A minimum working dilution of 1:5,000 is determined by immunohistochemistry using formalin-fixed, paraffin-embedded sections of rat cerebellum.

Note: In order to obtain best results and assay sensitivity in different techniques and preparations we recommend determining optimal working dilutions by titration test.

**References**


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