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ProductInformation

Anti-SNAP-23 (TS-19)
Developed in Rabbit, IgG Fraction of Antiserum

Product Number **S 2194**

Product Description

Anti-SNAP-23 (TS-19) is developed in rabbit using a synthetic peptide corresponding to amino acids 203-221, located at the C-terminus, of mouse SNAP-23, conjugated to KLH as immunogen. This sequence is identical in rat and highly conserved (84% identity) in human SNAP-23. 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-23 (TS-19) recognizes SNAP-23 (23 kDa). Applications include the detection of SNAP-23 by immunoblotting and immunofluorescence. Staining of the SNAP-23 band in immunoblotting is specifically inhibited with the SNAP-23 immunizing peptide (mouse, amino acids 203-221).

Trafficking between intracellular membrane compartments is largely mediated by vesicular transport. Proteins regulating this process are conserved in systems such as protein secretion in yeast, synaptic vesicle exocytosis, and intracellular vesicle fusion during membrane traffic in mammalian cells.[1] One key set of proteins that regulate these diverse biological processes are the soluble NSF-attachment protein receptors - SNAREs. SNARE proteins are present on both vesicle membranes (vesicle SNAREs or v-SNAREs) and on target membranes (target SNAREs or t-SNAREs). In the process of vesicle docking and/or fusion in neuronal systems, a core complex is formed between the t-SNARE syntaxin and SNAP-25, localized at the target presynaptic membrane and the v-SNARE synaptobrevin/VAMP proteins. SNAP-23 (synaptosomal-associated protein, 23 kDa, syndet), is a non-neuronal homolog of SNAP-25, originally identified in a human B-lymphocyte cDNA library in a yeast two-hybrid screen for proteins interacting with syntaxin 4.[2] SNAP-23 is ubiquitously expressed, and like SNAP-25 has been localized mainly to the plasma membrane.[2-6]

The primary structure of SNAP-23 is 59% identical to SNAP-25. It contains a central cluster of cysteine residues that is a site of palmitoylation in SNAP-25 and predicted coiled-coil segments that are thought to serve in binding other SNAREs, especially syntaxins 1, 3 and 4. At least five splice variants of SNAP-23 have been identified including SNAP-23A-E, all of which show deletions in comparison to SNAP-23A.[6,7] SNAP-23 is thought to be a key player in many distinct protein trafficking events in non-neuronal cells. For example, SNAP-23 is involved in diverse protein trafficking events such as GLUT4 trafficking in adipocytes, compound exocytosis in mast cells, polarized protein trafficking, platelet dense core granule release.[8-12]

Reagent

The product is provided as a solution 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 data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous 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 1:1,000 is determined by immunoblotting, using a whole cell extract of mouse fibroblasts NIH3T3 cell.

A minimum working dilution of 1:200 is determined by immunofluorescent staining of the mouse embryonic 3T3-L1 cell line.

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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