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ProductInformation

Anti-SNAP-29
Developed in Rabbit, IgG Fraction of Antiserum

Product Number **S 2069**

Product Description

Anti-SNAP-29 is developed in rabbit using a synthetic peptide corresponding to the C-terminus of mouse SNAP-29 (amino acids 238-257), conjugated to KLH as immunogen. This sequence is identical in rat SNAP-29 and highly conserved (single amino acid substitution) in human SNAP-29. 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-29 recognizes SNAP-29. Applications include the detection of SNAP-29 by immunoblotting (29 kDa) and immunofluorescence. Staining of SNAP-29 in immunoblotting is specifically inhibited with the SNAP-29 immunizing peptide (mouse, amino acids 238-257).

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-SNAREs syntaxin and SNAP-25, localized at the target presynaptic membrane and the v-SNARE synaptobrevin/VAMP proteins. SNAP-29 (**sy**n**a**ptosomal-**a**ssociated **p**rotein 29 kDa, Golgi SNARE of 32 kDa, GS32), is a non-neuronal homolog of SNAP-25, originally isolated from a human cDNA library in a yeast two-hybrid screen for proteins interacting with syntaxin 3, and is localized predominantly in intracellular membrane structures, specifically with the Golgi apparatus.[2] SNAP-29 is ubiquitously expressed, in neuronal and non-neuronal cells. The sequence of SNAP-29 is 17% identical to SNAP-23 and SNAP-25, and 83% to its rat homolog GS32. SNAP29 has been suggested to play a role primarily in intra-Golgi traffic.[3] Several evidences indicate that SNAP-29 plays a role in regulating a variety of intracellular membrane trafficking pathways.[2,4] While SNAP-23 preferentially binds to plasma-membrane localized syntaxins, SNAP-29 is capable of participating in various intracellular transport steps, by interacting with different syntaxins and VAMPs, specifically localized to different membrane compartments.[2,4,5] SNAP-29 is present in synapses, interacts directly with syntaxin 1A, competes with α-SNAP for binding to the SNARE complex, and consequently modulates synaptic transmission by inhibiting disassembly of the SNARE complex.[6] SNAP-29 has been found to play a role in the endocytosis of IGF1 receptors, by directly interacting with IGF1R.[7]

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.

A minimum working dilution of 1:100 is determined by immunofluorescence, using mouse fibroblast NIH3T3 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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