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ProductInformation

Anti-Syntaxin 7
Developed in Rabbit, IgG Fraction of Antiserum

Product Number **S 4819**

Product Description

Anti-Syntaxin 7 is developed in rabbit using a synthetic peptide corresponding to amino acids 131-149 located at the mid-region of rat syntaxin 7, conjugated to KLH, as immunogen. This sequence is highly conserved (two amino acid substitutions) in mouse and human syntaxin 7 (~80% identity). 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.

The antibody recognizes syntaxin 7 (35 kDa). Applications include the detection of syntaxin 7 by immunoblotting and immunofluorescence. Staining of syntaxin 7 in immunoblotting is specifically inhibited with the syntaxin 7 immunizing peptide (rat, amino acids 131-149).

Trafficking between intracellular membrane compartments is largely mediated by vesicular transport. Syntaxins belong to the large family of target-soluble NSF-attachment protein receptors (t-SNAREs) involved in docking and fusion of vesicles. Syntaxins function during vesicular transport as receptors on the target membrane, and contribute to the specificity of the docking and fusion process by interacting with vesicle-associated receptors (v-SNAREs).[1] Several members of the syntaxin family have been identified and each localizes to specific membrane compartments, including the plasma membrane, endoplasmic reticulum (ER) and Golgi apparatus, along distinct exocytotic and endocytotic pathways. Syntaxin 7 (Syn7, 35 kDa), a yeast and Arabidopsis thaliana Vam3p homologue, is a member of the t-SNARE family that mediates endocytic trafficking in mammalian cells.[2-6] Syntaxin 7 shares 24% identity with yeast Vam3p and is ubiquitously expressed in multiple tissues. Considerable evidence indicates that syntaxin 7 is localized to membrane compartments of late endosomes, where it is required for the fusion of late endosomes with lysosomes. It is also an essential factor for lysosome homotypic fusion and endocytic trafficking to late endosomes suggesting that syntaxin 7 plays a major role in lysosomal biogenesis. In endosomal membranes, syntaxin 7 forms complexes with the v-SNARE Vamp-8, as well as with syntaxin 8 and vti1b. Induced expression of mouse syntaxin 7 lacking the transmembrane domain blocks endocytic transport from the early to late endosome.[4,5] Syntaxin 7 has been described to play an important role during phagocytosis.[7] It is required for interaction of late endosomes and/or lysosomes with the phagosome, where it is recruited and accumulates throughout the phagosomal maturation process.

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 working dilution of 1:1,000-1:2,000 is determined by immunoblotting, using a whole cell extract of rat kidney NRK cell line.

A working dilution of 1:500-1,000 is determined by immunofluorescence staining of rat kidney NRK 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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3. Wong, S.H., et al., J. Biol. Chem., **273**, 375-380 (1998).
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5. Mullock, B.M., et al., Mol. Biol. Cell, **11**, 3137-3153 (2000).
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