3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

Anti-Munc-18 Interacting Protein 1 (Mint1)
Developed in Rabbit
Affinity Isolated Antibody

Product Number **M 5567**

Product Description

Anti-Munc-18 Interacting Protein 1 (Mint1) was developed in rabbit using a synthetic peptide M(1) NHL-EGSAEVEVADEAP(17)C corresponding to amino acids 1-17 of rat Mint1 as the immunogen.

Anti-Munc-18 interacting protein 1 specifically recognizes munc-18 interacting protein 1 (Mint1) from rat brain extract as well as extract from HEK293 cells overexpressing the rat gene.

The munc-18 interacting protein (Mint) protein family is a group of evolutionarily conserved adaptor proteins that function in membrane transport and organization.[1] In mammals, there exist three Mint isoforms, Mint1, 2, and 3. Although there is little amino acid sequence conservation in the amino-terminal half, the carboxy-terminal half of these proteins is highly conserved. Within this conserved portion there exists a phosphotyrosine-binding (PTB) and a PSD-95/DLG-A/ZO-1 (PDZ) domain, which function as protein interaction modules. Mint1 and 2 appear to be expressed exclusively in the brain and are found to bind to Munc18, an essential component of the synaptic vesicle fusion machinery.[2] Mint3 is ubiquitously expressed in all tissues and is expressed at the lowest levels in the brain and testis. Studies show that mint3 does not interact with munc-18. Mint3 has been found to interact with the Alzheimer's Disease-related amyloid precursor protein (APP) and does so through its PTB and PDZ domains. It has been suggested that mint3 links APP to other transport machinery components, thereby regulating it transport, endocytosis, and metabolism. Abnormal APP metabolism has been shown to be the cause of an early-onset type of Alzheimer's disease

Reagents

Anti-Munc-18 interacting protein is supplied as 100 µg of affinity isolated antibody in phosphate buffered saline containing 1.0 mg/ml bovine serum albumin and 0.05 % sodium azide as 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.

Storage/Stability

Store at –20 °C. 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

The recommended working dilution is 1 µg/ml for immunoblotting.

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

References

1. Okamoto, M., et al., Neuroscience, **104**, 653-665 (2001).
2. Nakajima, Y., et al., Brain Res. Mol. Brain Res., **92**, 27-42 (2001).

mct/jk 3/2004