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ProductInformation

Anti-Munc-18-3
produced in rabbit, affinity isolated antibody

Catalog Number **M7695**

Product Description

Anti-Munc-18-3 is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 578-592 located at the C-terminus of mouse Munc-18-3 (GeneID: 20912), conjugated to KLH. This sequence is highly conserved (~90% identity) in human and rat Munc-18-3. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Munc-18-3 specifically recognizes Munc-18-3 by immunoblotting (~66 kDa). Staining of the Munc-18-3 band in immunoblotting is specifically inhibited by the immunizing peptide.

Munc-18 proteins (also known as syntaxin-binding proteins, STXBPs, unc-18) are a family of neuronal proteins that tightly bind to the synaptic fusion protein syntaxin-1A, a component of the SNARE complex critical for neurotransmitter release, and function in synaptic vesicle exocytosis.[1-4] Munc-18 proteins are highly homologous to the c. elegans unc-18, and weakly related to the yeast sec-1.[1, 2] Munc-18 isoforms in mammalian cells include neuronal Munc-18-1 (Munc-18a), Munc-18-2 (Munc18b), and Munc-18-3 (also known as Munc-18c, syntaxin-binding protein 3, STXBP3).[5, 6] Munc-18-1 is primarily expressed in neuronal tissues, whereas Munc-18-2 and Munc-18-3 are ubiquitously expressed. Munc-18-1 shares only 62% sequence homology with Munc-18-2 and 51% with Munc-18-3. Both Munc-18-1 and -2 isoforms bind tightly to syntaxins 1A, 2, and 3, but not to syntaxin 4. Munc-18c expressed in 3T3-L1 adipocytes has been shown to interact with syntaxin-2 and -4 and to inhibit the binding of syntaxin-4 to VAMP2. Munc-18c has been suggested to play a role in the docking/fusion of GLUT4-containing vesicles with the cell membrane of 3T3-L1 adipocytes.[7] Heterozygous knock-out of the Munc-18c gene in mice impairs insulin-stimulated GLUT4 translocation in skeletal muscle and increases the susceptibility for severe glucose intolerance.[8]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.5 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet 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, or storage in “frost-free” freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.75-1.5 µg/mL is recommended using mouse brain extract (S1 fraction).

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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4. Jahn, R., *Neuron*, **27**, 201-204 (2000).
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