

MUSK Antibody Blocking Peptide
Synthetic peptide
Catalog # BP7664d**Specification**

MUSK Antibody Blocking Peptide - Product InformationPrimary Accession [O15146](#)**MUSK Antibody Blocking Peptide - Additional Information****Gene ID** 4593**Other Names**

Muscle, skeletal receptor tyrosine-protein kinase, Muscle-specific tyrosine-protein kinase receptor, MuSK, Muscle-specific kinase receptor, MUSK

Target/Specificity

The synthetic peptide sequence used to generate the antibody [BP7664d](#) was selected from the region of human MUSK. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MUSK Antibody Blocking Peptide - Protein Information**Name** MUSK**Function**

Receptor tyrosine kinase which plays a central role in the formation and the maintenance of the neuromuscular junction (NMJ), the synapse between the motor neuron and the skeletal muscle (PubMed:[25537362](http://www.uniprot.org/citations/25537362)). Recruitment of AGRIN by LRP4 to the MUSK signaling complex induces phosphorylation and activation of MUSK, the kinase of the complex. The activation of MUSK in myotubes regulates the formation of NMJs through the regulation of different processes including the specific expression of genes in subsynaptic nuclei, the reorganization of the actin cytoskeleton and the clustering of the acetylcholine receptors (AChR) in the postsynaptic membrane. May regulate AChR phosphorylation and clustering through activation of ABL1 and Src family kinases which in turn regulate MUSK. DVL1 and PAK1 that form a ternary complex with MUSK are also important for MUSK-dependent regulation of AChR clustering. May positively regulate Rho family GTPases through FNTA. Mediates the phosphorylation of FNTA which promotes prenylation, recruitment to membranes and

activation of RAC1 a regulator of the actin cytoskeleton and of gene expression. Other effectors of the MUSK signaling include DNAJA3 which functions downstream of MUSK. May also play a role within the central nervous system by mediating cholinergic responses, synaptic plasticity and memory formation (By similarity).

Cellular Location

Postsynaptic cell membrane; Single-pass type I membrane protein. Note=Colocalizes with acetylcholine receptors (AChR) to the postsynaptic cell membrane of the neuromuscular junction

MUSK Antibody Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

MUSK Antibody Blocking Peptide - Images

MUSK Antibody Blocking Peptide - Background

MuSK activates signaling cascades responsible for many aspects of synapse formation, including the organization of the postsynaptic membrane, synapse-specific transcription, and presynaptic differentiation. MuSK also mediates agrin-induced aggregation of acetylcholine receptors at the mature vertebrate neuromuscular junction and also during synapse formation. It has been shown that a majority of AChR Ab-seronegative myasthenia gravis patients possess serum autoantibodies against MuSK.

MUSK Antibody Blocking Peptide - References

Blume-Jensen P, et al. Nature 2001. 411: 355.Cantrell D, J. Cell Sci. 2001. 114: 1439.Jhiang S Oncogene 2000. 19: 5590.Manning G, et al. Science 2002. 298: 1912.Moller, D, et al. Am. J. Physiol. 1994. 266: C351-C359.Robertson, S. et al. Trends Genet. 2000. 16: 368.Robinson D, et al. Oncogene 2000. 19: 5548.Van der Ven, P, et al. Hum. Molec. Genet. 1993. 2: 1889.Vanhaesebroeck, B, et al. Biochem. J. 2000. 346: 561.Van Weering D, et al. Recent Results Cancer Res. 1998. 154: 271.