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Musk Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AW5275

Specification

Musk Antibody - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q61006
Reactivity	**Rat**
Predicted	**Mouse**
Host	**Mouse**
Clonality	**monoclonal**
Calculated MW	**H=97,96,98;M=97,96,98;Rat=97,96,98 KDa**
Isotype	**IgG1,k**
Antigen Source	**HUMAN**

Musk Antibody - Additional Information

Gene ID 18198

Other Names
Muscle, skeletal receptor tyrosine-protein kinase, Muscle-specific tyrosine-protein kinase receptor, MuSK, Muscle-specific kinase receptor, Musk, Nsk2

Dilution
WB~~1:1000
IHC-P~~1:25

Target/Specificity
This mouse Musk antibody is generated from a mouse immunized with recombinant protein from mouse Musk.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Musk Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Musk Antibody - Protein Information

Name Musk

Synonyms Nsk2

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. 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.

Cellular Location
Postsynaptic cell membrane; Single-pass type I membrane protein. Note=Localizes to the postsynaptic cell membrane of the neuromuscular junction

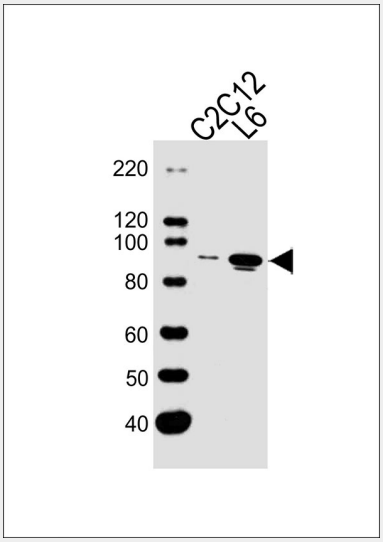
Tissue Location
Expressed preferentially in skeletal muscle.

Musk Antibody - Protocols

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

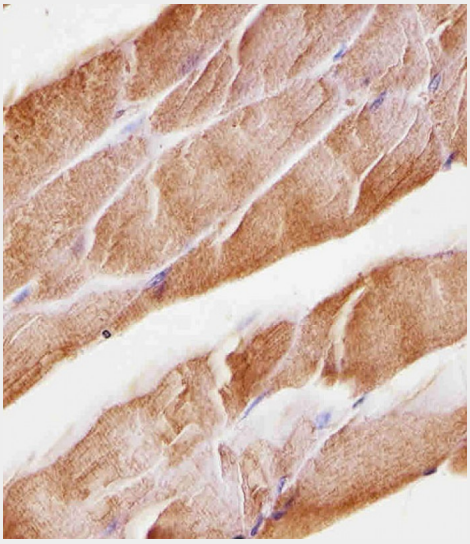
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Musk Antibody - Images



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Western blot analysis of lysates from mouse C2C12,rat L6 cell line (from left to right), using Musk Antibody(Cat. #AW5275). AW5275 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:5,000 dilution was used as the secondary antibody.



Immunohistochemical analysis of paraffin-embedded M. skeletal muscle section using Musk Antibody(Cat#AW5275). AW5275 was diluted at 1:25 dilution. A undiluted biotinylated goat anti-mouse IgG antibody was used as the secondary, followed by DAB staining.

Musk Antibody - Background

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. 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.

Musk Antibody - References

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Ganju P.,et al.Oncogene 11:281-290(1995).
DeChiara T.M.,et al.Cell 85:501-512(1996).
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Lin W.,et al.Nature 410:1057-1064(2001).