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MUSK Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7664D

Specification

MUSK Antibody - Product Information

Application	**WB, IF, FC,E**
Primary Accession	O15146
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**97056**

MUSK Antibody - 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
This MUSK antibody is generated from rabbits immunized with human MUSK recombinant protein.

Dilution
WB~~1:1000
IF~~1:10~50
FC~~1:10~50
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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

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). 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).

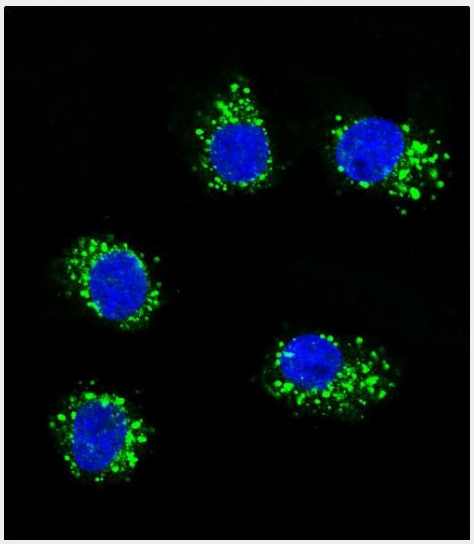
Cellular Location
Postsynaptic cell membrane; Single-pass type I membrane protein. Note=Colocalizes with acetylcholine receptors (AChR) to the postsynaptic cell membrane of the neuromuscular junction

MUSK Antibody - 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



Confocal immunofluorescent analysis of MUSK Antibody(Cat#AP7664d) with MDA-MB231 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).DAPI was used to stain the cell nuclear (blue).

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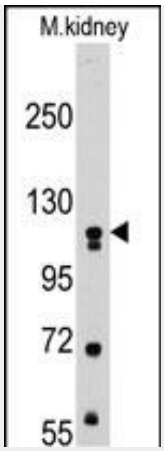
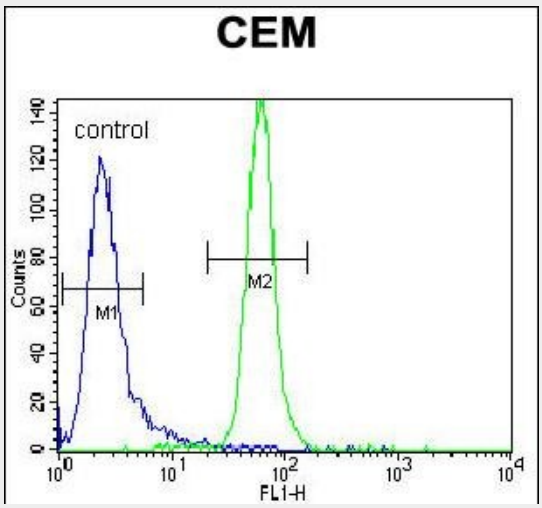


Western blot analysis of anti-MUSK Pab (Cat.#AP7664d) in mouse kidney tissue lysates (35ug/lane). MUSK(arrow) was detected using the purified Pab.



MUSK Antibody (Cat. #AP7664d) flow cytometric analysis of CEM cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

MUSK Antibody - 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 - References

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