

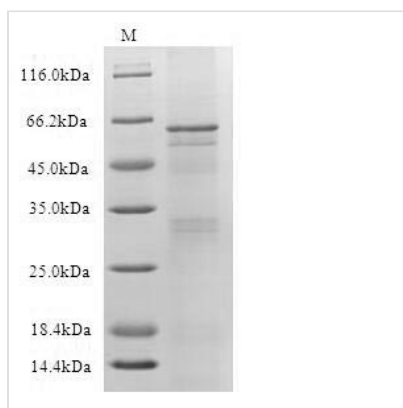


Recombinant Human Muscle, skeletal receptor tyrosine-protein kinase (MUSK), partial (Active)

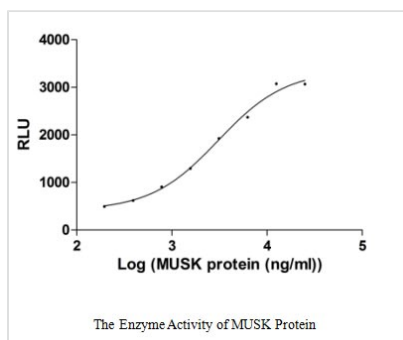
Product Code	CSB-CF015241HU
Relevance	Receptor tyrosine kinase which plays a central role in the formation and the maintenance of the neuromuscular junction (NMJ), the synapse between the motor neuron and the skeletal muscle. Recruitment of AGRIN by LRP4 to the MUSK signaling complex induces phosphorylation 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
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	O15146
Storage Buffer	Tris-based buffer,50% glycerol
Product Type	Others
Immunogen Species	Homo sapiens (Human)
Biological Activity	Measured by ADP-Glo Kinase detection kit. The EC50 of MUSK is 2.65-3.58 µg/ml.
Purity	≥ 90% as determined by SDS-PAGE.
Sequence	LPKAPVITTPLETVDALVEEVATFMCAVESYPQPEISWTRNKILIKLFDTRYISIRE NGQLLTILSVEDSDDGIYCCTANNGVGGAVESCGALQVKMKPKITRPPINVKIIE GLKAVLPCTTMGNPKPSVSWIKGDSPLRENSRIAVLESGSLRIHNVQKEDAGQ YRCVAKNSLGTAYSKVVKLEVEEESEPEQDTKVFARILRAPESHNVTFGSFVTL HCTATGIPVPTITWIENGNAVSSGSIQESVKDRVIDSRLQLFITKPGLYTCIATNK HGEKFSTAKAAATISIAEWREYCLAVKELFCAKEWLVMEEEKTHRGLYRSEMHL LSVPECSKLPMSHWDPTACARLPHLAFPPMTSSKPSVDIPNLPSSSSSSFSVS PTYSMTVIISIMSSFAIFVLLTITTYCCRRRKQWKNKKRESAAVTLTTLPESELLL DRLHPNPMYQRMPLLLNPKLLSLEYPRNNIEYVRDI



Research Area	Signal Transduction
Source	in vitro E.coli expression system
Target Names	MUSK
Expression Region	24-495aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	56.5kDa
Protein Length	Extracellular Domain

Image


(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Activity
Measured by ADP-Glo Kinase detection kit. The EC₅₀ of MUSK is 2.65-3.58 μg/ml.

Shelf Life

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