

Human MUSK Kinase Protein (aa 433-783, His & GST Tag)

Catalog Number: 11918-H20B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CMS9; FADS

Protein Construction:

A DNA sequence encoding the C-terminal segment of human MUSK isoform 2 (O15146-2) (Arg 433-Val 783) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Kinase activity untested

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human MUSK (aa 433-783)/GST chimera consists of 588 amino acids and has a calculated molecular mass of 68 kDa. It migrates as an approximately 58 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Supplied as sterile 20mM Tris, 500mM NaCl, pH 7.4, 10mM GSH

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

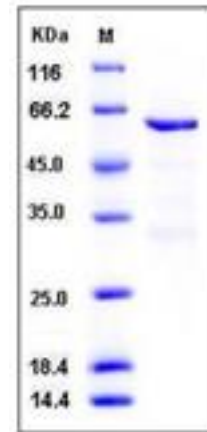
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Muscle, skeletal receptor tyrosine-protein kinase, also known as Muscle-specific tyrosine-protein kinase receptor, Muscle-specific kinase receptor, and MUSK, is a single-pass type I membrane protein which belongs to the protein kinase superfamily and tyr protein kinase family. MUSK contains one FZ (frizzled) domain, three Ig-like C2-type (immunoglobulin-like) domains and one protein kinase domain. This protein is a muscle-specific tyrosine kinase receptor and it may play a role in clustering of the acetylcholine receptor in the postsynaptic neuromuscular junction. MUSK expression is increased in muscle cells stimulated with Wnt or at conditions when the Wnt signaling was activated. MUSK is a muscle-specific receptor tyrosine kinase that is activated by agrin. It has a critical role in neuromuscular synapse formation. MUSK is a receptor tyrosine kinase that is a key mediator of agrin's action and is involved in neuromuscular junction (NMJ) organization. Defects in MUSK encoding gene is a cause of autosomal recessive congenital myasthenic syndrome (CMS). Congenital myasthenic syndromes are inherited disorders of neuromuscular transmission that stem from mutations in presynaptic, synaptic, or postsynaptic proteins. MUSK mutations lead to decreased agrin-dependent AChR aggregation, a critical step in the formation of the neuromuscular junction. Mutations in this receptor encoding gene also have been associated with congenital myasthenic syndrome.

References

1. Glass D, *et al.* (1996) Agrin acts via a MuSK receptor complex. *Cell*. 85 (4): 513-23.
2. DeChiara T, *et al.* (1996) The receptor tyrosine kinase MuSK is required for neuromuscular junction formation in vivo. *Cell*. 85 (4): 501-12.
3. Hoch W, *et al.* (2001) Auto-antibodies to the receptor tyrosine kinase MuSK in patients with myasthenia gravis without acetylcholine receptor antibodies. *Nat Med*. 7 (3): 365-8.

Manufactured By Sino Biological Inc., FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

For US Customer: Fax: 267-657-0217 • Tel: 215-583-7898

Global Customer: Fax :+86-10-5862-8288 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>