

Product datasheet

Recombinant human MST3 protein ab51413

2 Images

Overview

Product name	Recombinant human MST3 protein
Protein length	Protein fragment

Description

Nature	Recombinant
Source	Baculovirus infected Sf9 cells
Amino Acid Sequence	
Species	Human
Amino acids	1 to 311

Specifications

Our [Abpromise guarantee](#) covers the use of **ab51413** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Biological activity	Specific activity 265 nmol/min/mg.
Applications	Functional Studies SDS-PAGE
Form	Liquid
Additional notes	ab204875 (PKC epsilon peptide) can be utilized as a substrate for assessing kinase activity

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.87% Sodium chloride, 25% Glycerol, 0.00292% EDTA, 0.79% Tris HCl, 0.00385% DTT, 0.00174% PMSF, 0.0038% EGTA This product is an active protein and may elicit a biological response in vivo, handle with caution.
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General Info

Function

Serine/threonine-protein kinase that acts on both serine and threonine residues and promotes apoptosis in response to stress stimuli and caspase activation. Mediates oxidative-stress-induced cell death by modulating phosphorylation of JNK1-JNK2 (MAPK8 and MAPK9), p38 (MAPK11, MAPK12, MAPK13 and MAPK14) during oxidative stress. Plays a role in a staurosporine-induced caspase-independent apoptotic pathway by regulating the nuclear translocation of AIFM1 and ENDOG and the DNase activity associated with ENDOG. Phosphorylates STK38L on 'Thr-442' and stimulates its kinase activity. Regulates cellular migration with alteration of PTPN12 activity and PXN phosphorylation: phosphorylates PTPN12 and inhibits its activity and may regulate PXN phosphorylation through PTPN12. May act as a key regulator of axon regeneration in the optic nerve and radial nerve.

Tissue specificity

Isoform A is ubiquitous. Isoform B is expressed in brain with high expression in hippocampus and cerebral cortex.

Sequence similarities

Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. STE20 subfamily. Contains 1 protein kinase domain.

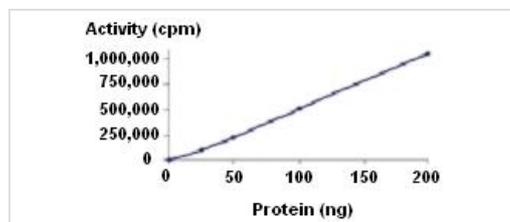
Post-translational modifications

Proteolytically processed by caspases during apoptosis. Proteolytic cleavage results in kinase activation, nuclear translocation of the truncated form (MST3/N) and the induction of apoptosis. Isoform B is activated by phosphorylation by PKA. Oxidative stress induces phosphorylation. Activated by autophosphorylation at Thr-190 and phosphorylation at this site is essential for its function. Manganese, magnesium and cobalt-dependent autophosphorylation is mainly on threonine residues while zinc-dependent autophosphorylation is on both serine and threonine residues.

Cellular localization

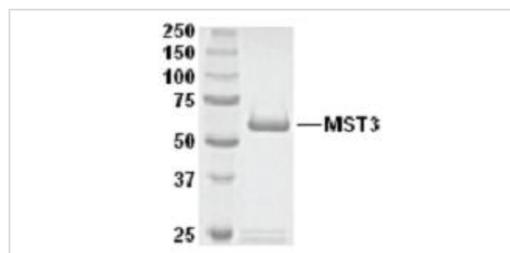
Cytoplasm. Nucleus. Membrane. The truncated form (MST3/N) translocates to the nucleus. Co-localizes with STK38L in the membrane.

Images



Kinase activity assay - specific activity 265 nmol/min/mg.

Functional Studies - Recombinant human MST3 protein (ab51413)



Molecular weight 63 kDa

SDS-PAGE - Recombinant human MST3 protein (ab51413)

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