

Product datasheet

Recombinant human Serine/threonine-protein kinase 4/MST-1 ab60337

4 Images

Description

Product name	Recombinant human Serine/threonine-protein kinase 4/MST-1
Purity	> 85 % Densitometry. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Tags	GST tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab60337** in the following tested applications.

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

Applications	Functional Studies SDS-PAGE
Form	Liquid
Additional notes	ab204853 (IRS1 peptide) can be utilized as a substrate for assessing kinase activity Previously labelled as Serine/threonine-protein kinase 4

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: 0.0038% EGTA, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292% EDTA, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride This product is an active protein and may elicit a biological response in vivo, handle with caution.
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General Info

Function

Stress-activated, pro-apoptotic kinase which, following caspase-cleavage, enters the nucleus and induces chromatin condensation followed by internucleosomal DNA fragmentation. Key component of the Hippo signaling pathway which plays a pivotal role in organ size control and tumor suppression by restricting proliferation and promoting apoptosis. The core of this pathway is composed of a kinase cascade wherein MST1/MST2, in complex with its regulatory protein SAV1, phosphorylates and activates LATS1/2 in complex with its regulatory protein MOB1, which in turn phosphorylates and inactivates YAP1 oncoprotein and WWTR1/TAZ. Phosphorylation of YAP1 by LATS2 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration. MST1/MST2 are required to repress proliferation of mature hepatocytes, to prevent activation of facultative adult liver stem cells (oval cells), and to inhibit tumor formation (By similarity). Phosphorylates 'Ser-14' of histone H2B (H2BS14ph) during apoptosis. Phosphorylates FOXO3 upon oxidative stress, which results in its nuclear translocation and cell death initiation.

Tissue specificity

Ubiquitously expressed.

Sequence similarities

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

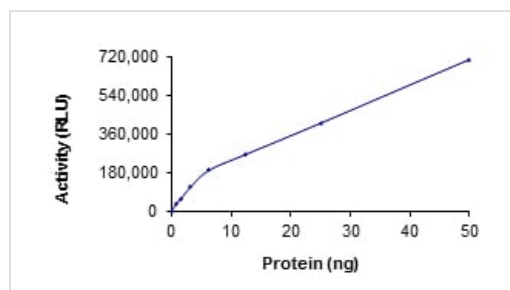
Post-translational modifications

Autophosphorylated on serine and threonine residues.

Cellular localization

Cytoplasm. Nucleus. The caspase-cleaved form cycles between the nucleus and cytoplasm.

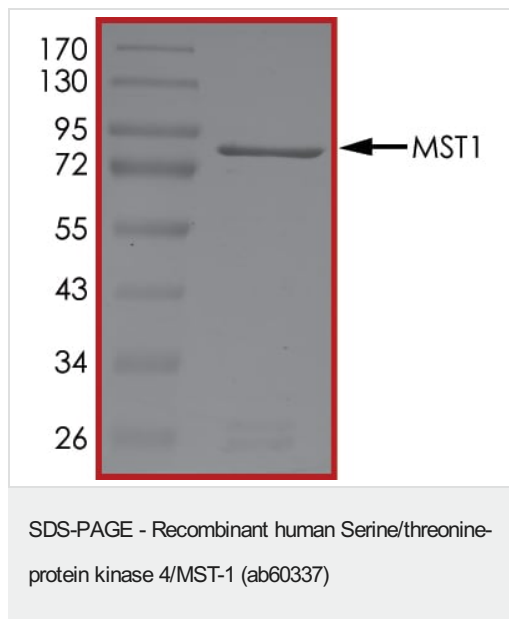
Images



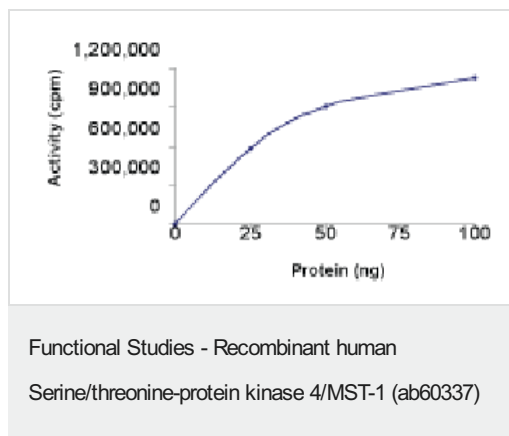
The specific activity of Serine/threonine-protein kinase 4/MST-1 (ab60337) was determined to be 101.7 nmol/min/mg as per activity assay protocol and was equivalent to 953 nmol/min/mg as per radiometric assay

Functional Studies - Recombinant human

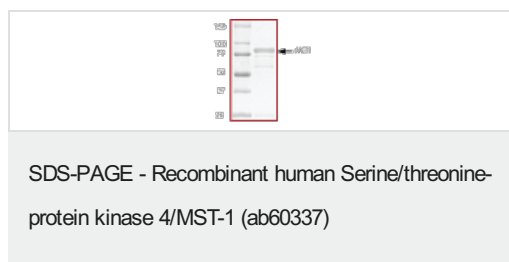
Serine/threonine-protein kinase 4/MST-1 (ab60337)



SDS PAGE analysis of ab60337



Sample Kinase Activity Plot.



ab60337 on SDS-PAGE, MW ~83kDa.

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