

MST1 recombinant protein

Recombinant MST1 protein

CATALOG #
AAA59637

HOST
Baculovirus

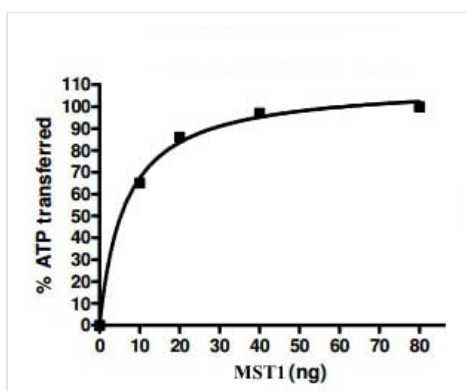
PRODUCT SYNONYMS

MST1; Recombinant MST1 protein; Mammalian STE20-Like Protein Kinase 1; STK4; KRS2; YSK3; TIAC; MST1 recombinant protein

PRODUCT SPECIFICATIONS

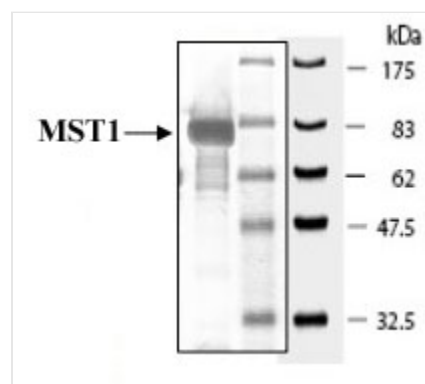
Host	Baculovirus
Form/Format	10ug recombinant Mst1 expressed in Sf9 cells and supplied in a buffer of 45mM Tris-HCl, pH8.0, 124mM NaCl, 2.4mM KCl, 3mM DTT, 18mM glutathione, and 10% glycerol.
Protein Species	Human
Tag	GST-Tag
Protein Details	Amino acids 2-488 of MST1 (accession number NP_006273.1) were expressed with an N-terminal GST-Tag, (82kDa) in Sf9 cells using a baculovirus expression system.
Notes	Recombinant MST1 is suitable for use in kinase assays. A good starting point is 5 to 25ng of enzyme per assay.
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 degree C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. Shipping Temp: Dry Ice

IMAGES



Application Data

MST1 activity assay. Recombinant MST1 activity measured using a fluorescent kinase assay.



SDS-PAGE

MST1 protein gel. MST1 (6 ?g) run on an SDS-PAGE gel and stained with Coomassie blue.

ADDITIONAL INFORMATION

Related Product Information for MST1 recombinant protein	Short Description: MST1 (Mammalian STE20-like protein kinase 1, STK4, KRS2) is a kinase that phosphorylates histone H2B at serine 14 during apoptosis and in response to double-strand DNA breakage. Amino acids 2-488 of MST1 (accession number NP_006273.1) were expressed with an N-terminal GST-Tag, (MW = 82 kDa) in Sf9 cells using a baculovirus expression system. Recombinant MST1 protein can be used in kinase assays. Background: MST1 (Mammalian STE20-Like Protein Kinase 1) is a 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 STK3/MST2 and STK4/MST1, 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. STK3/MST2 and STK4/MST1 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. Phosphorylates MOBKL1A, MOBKL1B and RASSF2. Phosphorylates TNNI3 (cardiac Tn-I) and alters its binding affinity to TNNC1 (cardiac Tn-C) and TNNT2 (cardiac Tn-T). Phosphorylates FOXO1 on Ser-212 and regulates its activation and stimulates transcription of PMAIP1 in a FOXO1-dependent manner. Phosphorylates SIRT1 and inhibits SIRT1-mediated p53/TP53 deacetylation, thereby promoting p53/TP53 dependent transcription and apoptosis upon DNA damage. Acts as an inhibitor of PKB/AKT1. Phosphorylates AR on Ser-650 and suppresses its activity by intersecting with PKB/AKT1 signaling and antagonizing formation of AR-chromatin complexes.
Product Categories/Family for MST1 recombinant protein	Recombinant Proteins ; Kinase

NCBI AND UNIPROT INFORMATION

NCBI GI #	5454096
NCBI GeneID	6789
NCBI Accession #	NP_006273.1
NCBI GenBank Nucleotide #	NM_006282.2
UniProt Accession #	Q13043 ; Q15802 ; Q4G156 ; Q5H982 ; Q6PD60 ; Q9BR32 ; Q9NTZ4 ; B2RCR8 ; Q15452 ; Q59FZ4 ; Q5H9T5 ; Q9BS84
Molecular Weight	55,630 Da
NCBI Official Full Name	serine/threonine-protein kinase 4
NCBI Official Synonym Full Names	serine/threonine kinase 4
NCBI Official Symbol	STK4
NCBI Official Synonym Symbols	KRS2; MST1; YSK3; DKFZp686A2068
NCBI Protein Information	serine/threonine-protein kinase 4; MST-1; OTTHUMP00000043418; OTTHUMP00000063226; STE20-like kinase MST1; mammalian sterile 20-like 1; kinase responsive to stress 2; mammalian STE20-like protein kinase 1; serine/threonine-protein kinase Krs-2; dJ211D12.2
UniProt Protein Name	Serine/threonine-protein kinase 4
UniProt Gene Name	STK4
UniProt Synonym Gene Names	KRS2; MST1; MST-1; MST1/N; MST1/C

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.