Recombinant STK3 protein (His tag)

Catalog Number	540244
Synonyms	Mammalian STE20-like protein kinase 2; MST-2; STE20-like kinase MST2; Serine/threonine-protein kinase Krs-1; MST2/N; MST2/C
Species	Human
Expression System	E. coli
Accession	Q13188
Molecular Weight	Predictes a molecular mass of 36.94 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 39 kDa band.

Product Information

Sequence Region	1-311
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-311 aa (Q13188) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Serine/threonine-protein kinase 3 (STK3) Fragment (residues 1-311) - a high-purity protein encompassing the complete protein kinase domain of this critical stress-activated kinase. This fragment serves as an essential tool for studying Hippo signaling pathway mechanisms, apoptosis regulation, and kinase activity assays without interference from regulatory domains. Serine/threonine-protein kinase 3 (STK3/MST2) is a central component of the Hippo signaling pathway, which plays a fundamental role in organ size control and tumor suppression by restricting cellular proliferation and promoting apoptosis. This stress-activated, pro-apoptotic kinase functions in a kinase cascade with STK4/MST1, where it phosphorylates and activates LATS1/2 kinases, ultimately leading to inactivation of YAP1 oncoprotein and WWTR1/TAZ transcriptional coactivators. STK3 is crucial for repressing hepatocyte proliferation, preventing activation of liver stem cells, and inhibiting tumor formation. The protein localizes primarily to the cytoplasm and nucleus, with caspase-cleaved forms cycling between these compartments. Beyond its Hippo pathway functions, STK3 also phosphorylates NEK2 to regulate centrosome disjunction, activates RAF1 by suppressing inhibitory phosphorylation, and modulates ESR1 transcriptional activity. The 1-311 fragment specifically contains the complete protein kinase domain (residues 27-278), making it ideal for investigating the core catalytic functions of this important regulatory kinase.