

STK3 (Human), Active

Full-length recombinant protein expressed in Sf9 cells

Cat# CY-SPS24

Lot No. B353-1
5 µg 0.1 µg/µl

Background:

STK3, also known as MST2, encodes a protein of 491-amino acid which contains an N-terminal catalytic domain characteristic of STKs (1). STK3 and STK4 share 94% amino acid identity in the catalytic domain and 78% identity overall. RAF1 has been shown to counteract apoptosis by suppressing the activation of mammalian sterile 20-like kinase (MST2). STK3 is a kinase that is activated by the proapoptotic agents staurosporine and FAS ligand (2). STK3 activation presumably allows cells to resist unfavorable environmental conditions.

Product Description:

Recombinant full-length human STK3 was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag. The gene accession number is BC010640.

Gene Aliases:

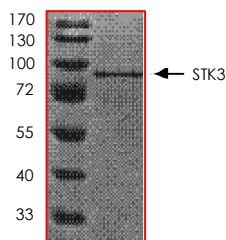
KRS1; MST2

Formulation:

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 25% glycerol.

Purity & Molecular Weight:

The purity was determined to be >80% by densitometry. Approx. MW 87kDa.



Storage:

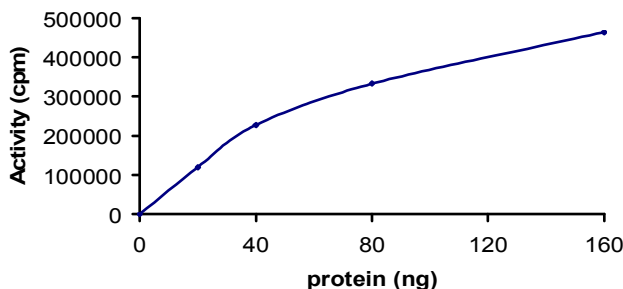
Store product at -70 °C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

Unopened vial at -70 °C, 1 year from date of shipment.

Specific Activity:

The specific activity was determined to be 277 nmol/min/mg as per Activity Assay Protocol.

**Activity Assay Protocol:**

Assay activity of the kinase in a 25 μ L reaction consisting of 5 μ L of 5 X Kinase Assay Buffer, 10 μ L of 1 mg/ml the Substrate Solution, 5 μ L of diluted kinase and 5 μ L of 250 μ M ATP solution containing [γ - 32 P] ATP (0.167 μ Ci/ μ L). Start the reaction by adding the ATP solution. Incubate for 15 minutes at 30°C. Terminate the reaction by spotting 20 μ L of the reaction mixture onto phosphocellulose P81 paper. Air-dry the P81 paper and sequentially wash 4 times for approximately 10 minutes each in 1% phosphoric acid with constant gentle stirring. Count the P81 paper in a liquid scintillation counter.

Substrate Solution:

Myelin basic protein (MBP) diluted in distilled H₂O to a final concentration of 1 mg/ml.

5 X Kinase Assay Buffer:

25mM MOPS, 12.5mM β -glycerol-phosphate, 25mM MgCl₂, 5mM EGTA, 2mM EDTA. Add 0.25mM DTT to Kinase Assay Buffer prior to use.

References:

- 1.Creasy, C L. et al: Cloning and characterization of a member of the MST subfamily of Ste20-like kinases. Gene 167: 303-306, 1995.
- 2.Lee, K K. et al: MST, a physiological caspase substrate, highly sensitizes apoptosis both upstream and downstream of caspase activation. J. Biol. Chem. 276: 19276-19285, 2001.

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