

PAK4 (Human), Active

Full-length recombinant protein expressed in Sf9 cells

Cat# CY-SPP05

Lot No. A064-1
5 µg 0.1 µg/µl

Background:

PAK4 is a recently identified member of the p21-activated kinases (PAKs) which have been implicated in the regulation of cell morphology, motility and transformation. These serine/threonine kinases are activated by and are effectors of small GTPases, cdc 42 and Rac. PAK4 belongs to the Group II PAKs which also includes PAK5 and PAK6. PAK4 has been shown to regulate cell morphology and cytoskeletal organization in mammalian cells.

Product Description:

Recombinant full-length human PAK4 was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag. The gene accession number is NM_005884.

Gene Aliases:

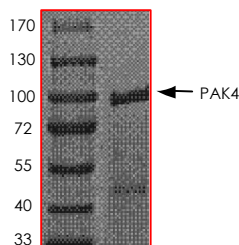
None

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 >90% by densitometry. Approx. MW 90kDa.



Storage:

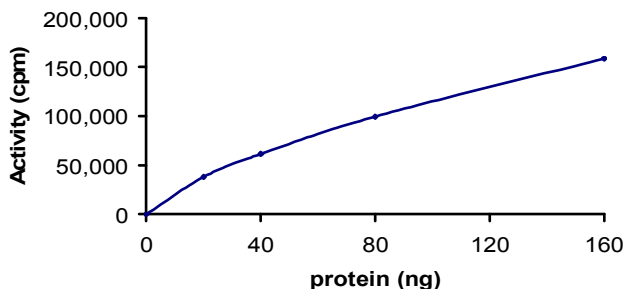
Store product at -70°C . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

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

Specific Activity:

The specific activity was determined to be 83 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:

PAK synthetic peptide substrate (CKRPRAASFAE) 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. Jaffer, Z M. et al: p21-activated kinases: three more join the Pak. Int J Biochem Cell Biol. 2002 Jul;34(7):713-7.
2. Qu, J. et al: Activated PAK4 regulates cell adhesion and anchorage-independent growth. Mol Cell Biol. 2001 May;21(10):3523-33.

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