

PAK7 (Human), Active

Full-length recombinant protein expressed in Sf9 cells

Cat# CY-SPP07

Lot No. A116-1
5 µg 0.1 µg/µl

Background:

PAK7 (also known as PAK5) is a novel human PAK family kinase that contains a CDC42/Rac1 interactive binding (CRIB) motif at the N-terminus and a Ste20-like kinase domain at the C-terminus (1). The p21-activated kinase (PAK) family of protein kinases has recently attracted considerable attention as an effector of Rho family of small G proteins and as an upstream regulator of MAPK signalling pathways during cellular events such as re-arrangement of the cytoskeleton and apoptosis. PAK7 like the other Paks has been implicated in the regulation of cell morphology, motility and transformation.

Product Description:

Recombinant full-length human PAK7 was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag. The gene accession number is NM_177990.

Gene Aliases:

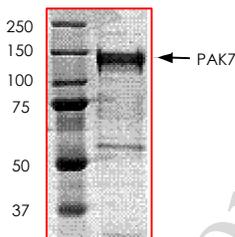
PAK5; KIAA1264; MGC26232

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 >75% by densitometry. Approx. MW 130kDa.



Storage:

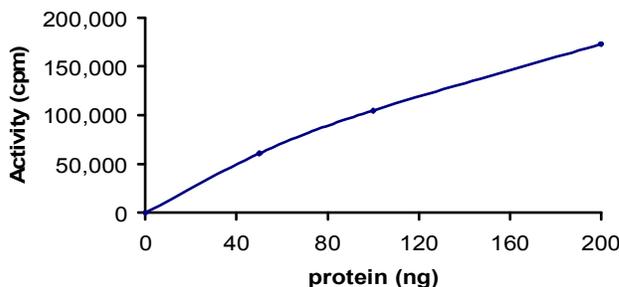
Store product at -70 °C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

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

Specific Activity:

The specific activity was determined to be 55 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.Pandey, A. et al: Cloning and characterization of PAK5, a novel member of mammalian p21-activated kinase-II subfamily that is predominantly expressed in brain. Oncogene. 2002 May 30;21(24):3939-48.

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