

FAK (Human), Active

Recombinant protein expressed in Sf9 cells

Cat# CY-SPP91

Lot No. G275-3
5 µg 0.1 µg/µl

Background:

FAK (Focal Adhesion Kinase) is a non-receptor protein tyrosine kinase involved in signal transduction from integrin-enriched focal adhesion sites that mediate cell contact with the extracellular matrix. FAK-enhanced signals have been shown to mediate the survival of anchorage-dependent cells and are critical for efficient cell migration in response to growth factor receptor and integrin stimulation (1). Elevated expression of FAK in human tumors has been correlated with increased malignancy and invasiveness (2). Elevated FAK expression in anaplastic astrocytoma and glioblastoma tumor biopsy samples has been demonstrated.

Product Description:

Recombinant human FAK (393-698) was expressed by baculovirus in Sf9 insect cells using an N-terminal His tag. The gene accession number is NM_153831.

Gene Aliases:

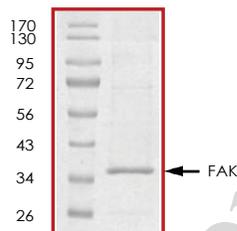
PTK2, FADK, FAK1, pp125FAK

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 >85% by densitometry. Approx. MW 36kDa.



Storage:

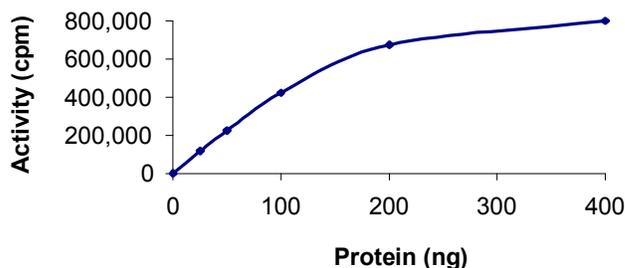
Store product at -70°C . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

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

**Specific Activity:**

The specific activity was determined to be 260 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, 5 μ L of 1 mg/ml the Substrate Solution, 10 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:

Poly (Glu:Tyr, 4:1) synthetic peptide substrate diluted in distilled H₂O to a final concentration of 1 mg/ml.

5 X Kinase Assay Buffer:

25mM MOPS, pH 7. 2, 12.5mM β -glycerol-phosphate, 25mM MgCl₂, 5mM EGTA, 2mM EDTA. Add 0.25mM DTT to Kinase Assay Buffer prior to use.

References:

- 1.Schaller, M D.: Biochemical signals and biological responses elicited by the focal adhesion kinase. *Biochim Biophys Acta*. 2001 Jul 25;1540(1):1-21.
- 2.Gabarra-Niecko, V. et al: FAK regulates biological processes important for the pathogenesis of cancer. *Cancer Metastasis Rev*. 2003 Dec;22(4):359-74.

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