

FES (Human), Active

Full-length recombinant protein expressed in Sf9 cells

Cat# CY-SPF03

Lot No. C149-1
5 µg 0.1 µg/µl

Background:

FES is a protooncogene that encodes a protein-tyrosine kinase distinct from c-Src, c-Abl and other nonreceptor tyrosine kinases. FES was originally identified as the cellular homolog of several transforming retroviral oncoproteins (1). FES plays a role in regulating cytoskeletal rearrangements and inside out signaling that accompany receptor ligand, cell matrix and cell-cell interactions. Genetic analysis using transgenic mouse model implicate FES in the regulation of inflammation and innate immunity (2). FES modulates the innate immune response of macrophages to LPS challenge, in part, by regulating the internalization and down-regulation of the TLR4 receptor complex.

Product Description:

Recombinant full-length human FES was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag. The gene accession number is NM_002005.

Gene Aliases:

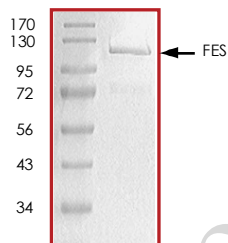
FPS

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 125kDa.



Storage:

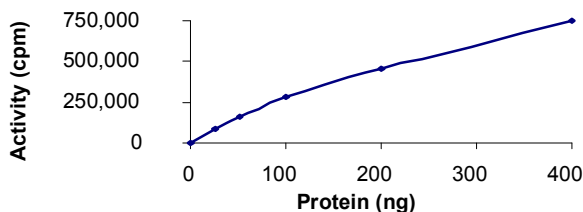
Store product at -70 °C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

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

**Specific Activity:**

The specific activity was determined to be 56 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:

Poly (Glu:Tyr, 4:1) synthetic peptide substrate diluted in distilled H₂O to a final concentration of 1mg/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.Smithgall T E. et al: The c-Fes family of protein-tyrosine kinases. Crit Rev Oncog. 1998;9(1):43-62.
- 2.Greer, P: Closing in on the biological functions of Fps/Fes and Fer. Nat Rev Mol Cell Biol. 2002 Apr;3(4):278-89.

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