FGR (Human), Active

Full-length recombinant protein expressed in Sf9 cells

Cat# CY-SPF10

Lot No. B290-1
5 µg 0.1 µg/µl

Background:

FGR is a protooncogene that is a unique member of the tyrosine kinase gene family. Certain lymphomas (but not sarcomas or carcinomas) express FGR-related messenger RNA. This transcript is detected in Burkitt's lymphoma cell lines naturally infected with Epstein-Barr virus (EBV), but not in EBV-negative Burkitt's lymphoma cells (1). FGR expression is limited to normal peripheral blood granulocytes, monocytes, and alveolar macrophages, all of which contain 50 to 100 copies of c-fgr mRNA per cell (2).

Product Description:

Recombinant full-length human FGR was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag. The gene accession number is NM_005248.

Gene Aliases:

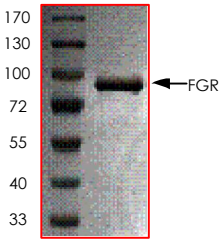
SRC2; c-fgr; p55c-fgr

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 >95% by densitometry. Approx. MW 86kDa.



Storage:

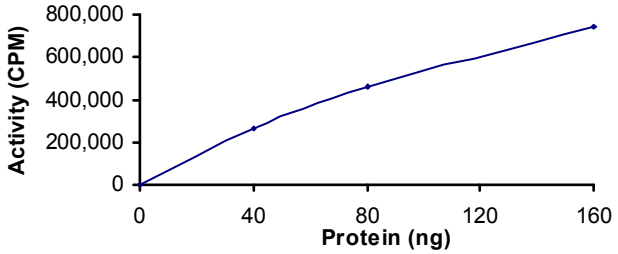
Store product at –70 °C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

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

Specific Activity:

The specific activity was determined to be 282 nmol/min/mg as per Activity Assay Protocol.



Activity Assay Protocol:

Assay activity of the kinase in a 25 µL reaction consisting of 5 µL of 5 X Kinase Assay Buffer, 10 µL of 1 mg/ml the Substrate Solution, 5 µL of diluted kinase and 5 µL of 250 µM ATP solution containing [gamma ^{32}P] ATP (0.167 µCi/µL). Start the reaction by adding the ATP solution. Incubate for 15 minutes at 30°C. Terminate the reaction by spotting 20 µL 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 H_2O to a final concentration of 1 mg/ml.

5 X Kinase Assay Buffer:

25mM MOPS, pH 7. 2, 12.5mM β -glycerol-phosphate, 25mM $MgC1_2$, 5mM EGTA, 2mM EDTA. Add 0.25mM DTT to Kinase Assay Buffer prior to use.

References:

1.Cheah, MS. et al: fgr proto-oncogene mRNA induced in B lymphocytes by Epstein-Barr virus infection. Nature. 1986 Jan 16-22;319(6050):238-40..

2.Willman, CL. et al: Differential expression and regulation of the c-src and c-fgr protooncogenes in myelomonocytic cells. Proc Natl Acad Sci U S A. 1987 Jul;84(13):4480-4..

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