

HCK (Human), Active

Recombinant protein expressed in Sf9 cells

Cat# CY-SPH02

Lot No. B067-1
5 µg 0.1 µg/µl

Background:

HCK, a protein-tyrosine kinase belonging to the Src family, is expressed in certain hemopoietic cells and especially prominent in cells of myeloid lineage, particularly mature granulocytes and monocytes (1). HCK gene is located on chromosome sequence 20q11-q12, a region that is affected by interstitial deletions in some acute myeloid leukemias and myeloproliferative disorders suggesting damage to HCK may contribute to the pathogenesis of these conditions (2).

Product Description:

Recombinant human HCK (230-497) was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag. The gene accession number is NM_002110.

Gene Aliases:

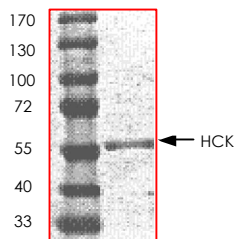
JTK9

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 57kDa.



Storage:

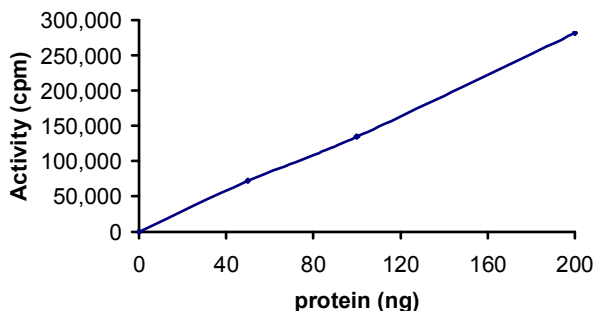
Store product at -70°C . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

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

Specific Activity:

The specific activity was determined to be 171 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 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.Ziegler, S F. et al: Novel protein-tyrosine kinase gene (hck) preferentially expressed in cells of hematopoietic origin. Molec. Cell. Biol. 7: 2276-2285, 1987.
- 2.Quintrell, N. et al: Identification of a human gene (HCK) that encodes a protein-tyrosine kinase and is expressed in hemopoietic cells. Molec. Cell. Biol. 7: 2267-2275, 1987

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