

LCK (Human), Active

Full-length recombinant protein expressed in Sf9 cells

Cat# CY-SPL03

Lot No. A066-1
5 µg 0.1 µg/µl

Background:

LCK (p56lck) is a member of the src family of non-receptor tyrosine kinases. It was identified as a gene rearranged and overexpressed in the murine lymphoma LSTRA, most likely as a result of the insertion of Moloney murine leukemia virus DNA immediately adjacent to the gene (1). Lck behaves as a proto-oncogene and can lead to cell transformation upon activation. A number of human cancer cell lines show overexpression of LCK, pointing to a possible role for this kinase in the initiation and maintenance of the transformed state in human cancers (2).

Product Description:

Recombinant full-length human LCK was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag. The gene accession number is NM_005356.

Gene Aliases:

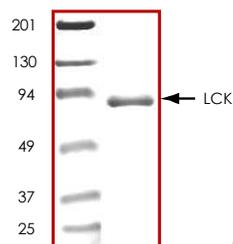
None

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 84kDa.



Storage:

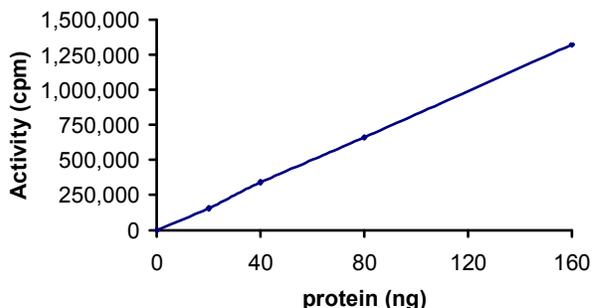
Store product at -70°C . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

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

**Specific Activity:**

The specific activity was determined to be 239 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. Fischer, S. et al: The amino terminal region of the p56 lck from LSTRA exerts negative modulation on the tyrosine kinase activity. *Biochem Biophys Res Commun.* 1987 Mar 30;143(3):819-26.
2. Veillette, A. et al: Expression of the lck tyrosine kinase gene in human colon carcinoma and other non-lymphoid human tumor cell lines. *Oncogene Res.* 1987 Sep-Oct;1(4):357-74.

CycLex Co., Ltd

1063-103 Tera-Sawaoka, Ina, Nagano, Japan 396-0002

Fax: 81-265-76-7618

e-mail: info@cyclex.co.jp

URL: <http://www.cyclex.co.jp>