Recombinant SRC protein

Catalog No: 81115, 81815
Lot No: 01618001
Expressed In: Baculovirus
Quantity: 20, 1000 µg
Concentration: 0.25 µg/µl
Source: Human

Buffer Contents: Recombinant SRC protein is supplied in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100 and 0.5 mM TCEP.

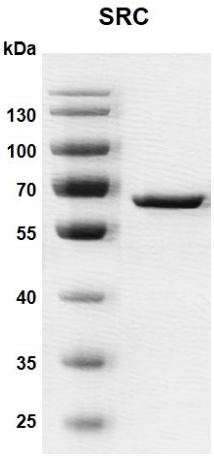
Background: SRC (SRC Proto-Oncogene) is a non-receptor protein tyrosine kinase which is activated following engagement of many different classes of cellular receptors including immune response receptors, integrins and other adhesion receptors, receptor protein tyrosine kinases, G protein-coupled receptors as well as cytokine receptors. It participates in signaling pathways that control a diverse spectrum of biological activities including gene transcription, immune response, cell adhesion, cell cycle progression, apoptosis, migration, and transformation. SRC appears to be one of the primary kinases activated following engagement of receptors and plays a role in the activation of other protein tyrosine kinase (PTK) families. Receptor clustering or dimerization leads to recruitment of SRC to the receptor complexes where it phosphorylates the tyrosine residues within the receptor cytoplasmic domains. In addition to phosphorylating focal adhesion proteins, SRC is also active at the sites of cell-cell contact adherens junctions and phosphorylates substrates such as beta-catenin (CTNNB1), delta-catenin (CTNND1), and plakoglobin (JUP). Another type of cell-cell junction, the gap junction, is also a target for SRC, which phosphorylates connexin-43 (GJA1). SRC is implicated in regulation of pre-mRNA-processing and phosphorylates RNA-binding proteins such as KHDRBS1. It also plays a role in PDGF-mediated tyrosine phosphorylation of both STAT1 and STAT3, leading to increased DNA binding activity of these transcription factors. SRC plays a role in EGF-mediated calcium-activated chloride channel activation. It also has a critical role in the stimulation of the CDK20/MAPK3 mitogen-activated protein kinase cascade by epidermal growth factor.

Protein Details: Recombinant human SRC protein was expressed in a baculovirus expression system as the full length protein (accession number NP_005408.1) with an N-terminal FLAG tag. The molecular weight of the protein is 61.1 kDa.

Application Notes: This protein is suitable for use in binding assays, inhibitor screening, and selectivity profiling.

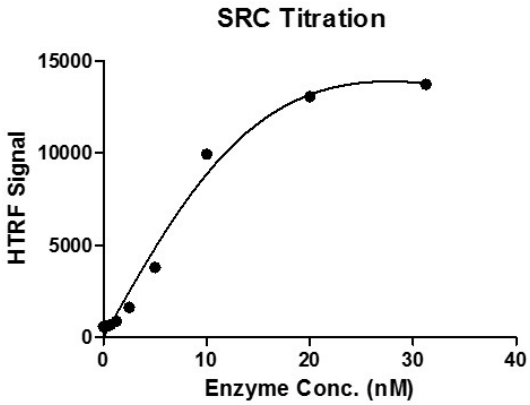
Kinase Activity Assay Conditions: 1 µM TK substrate was incubated with different concentrations of SRC protein in a reaction system containing 1× Enzymatic Buffer, 5 mM MgCl2, 1 mM DTT and 100 µM ATP for 1 hour. The 10 µl detection reagents containing TK antibody and SA-XL665, each of which was 1:100 diluted with 1× Detection Buffer were added and incubated with the reactions for 1 hour. All the operations and reactions were performed at room temperature, and HTRF KinASE TK assay was used to detect the enzymatic activity.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.



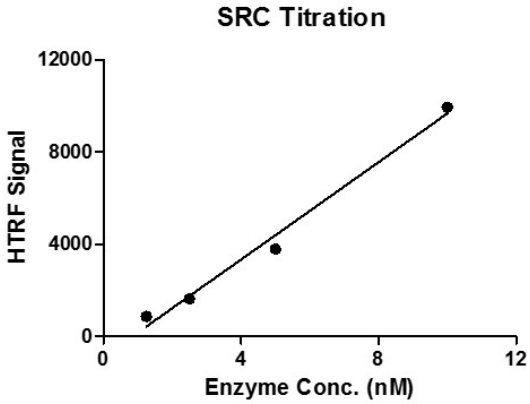
Recombinant SRC protein gel

10% SDS-PAGE Coomassie staining
MW: 61.1 kDa
Purity: >95%



HTRF assay for SRC protein activity

1 µM TK substrate was incubated with different concentrations of SRC protein in 10 µl reaction system containing 1×Enzymatic Buffer, 5 mM MgCl2, 1 mM DTT and 100 µM ATP for 1 hour. The detection reagents were added and incubated with the reactions for 1 hr. All the operations and reactions were performed at room temperature, and HTRF KinASE TK assay was used to detect the enzymatic activity.



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