SRC Protein, Human (His)

Cat. No.:	HY-P701321
Synonyms:	Proto-oncogene tyrosine-protein kinase Src; Proto-oncogene c-Src; pp60c-src (p60-Src); SRC1
Species:	Human
Source:	E. coli
Accession:	P12931 (G2-L536)
Gene ID:	6714
Molecular Weight:	64.2 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of Tris-based buffer，50% glycerol
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Src, a non-receptor protein tyrosine kinase, emerges as a central player in an array of cellular processes triggered by the engagement of diverse receptors, including immune response receptors, integrins, receptor protein tyrosine kinases, G protein-coupled receptors, and cytokine receptors. It orchestrates signaling pathways governing gene transcription, immune responses, cell adhesion, cell cycle progression, apoptosis, migration, and cellular transformation. While functional redundancy within the SRC kinase family complicates the identification of specific roles, SRC appears to be a primary kinase activated upon receptor engagement, influencing the activation of other protein tyrosine kinase (PTK) families. SRC is implicated in the regulation of cytoskeletal organization by phosphorylating substrates like AFAP1 and cortactin (CTTN). Its involvement extends to cell-cell and cell-matrix junctions, where it phosphorylates components such as beta-catenin (CTNNB1), delta-catenin (CTNND1), plakoglobin (JUP), and connexin-43 (GJA1). Additionally, SRC participates in PDGF-mediated tyrosine phosphorylation of STAT1 and STAT3, the RAS pathway, EGF-mediated calcium-activated chloride channel activation, and beta-arrestin desensitization. It also plays a crucial role in EGFR internalization, CDK20/MAPK3 mitogen-activated protein kinase cascade stimulation, and osteoclastic bone resorption. SRC's multifaceted activities highlight its intricate role in cellular regulation and signal transduction.

Caution: Product has not been fully validated for medical applications. For research use only.

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