

Lyn Protein, Human (sf9, GST)

Cat. No.:	HY-P73283
Synonyms:	Hck-2; JTK8; Tyrosine-protein kinase Lyn
Species:	Human
Source:	Sf9 insect cells
Accession:	P07948-1/NP_002341.1 (M1-P512)
Gene ID:	4067
Molecular Weight:	Approximately 75 kDa

PROPERTIES

Biological Activity	The specific activity was determined to be >30 nmol/min/mg using Poly(Glu,Tyr) 4:1 as substrate.
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 50 mM Tris, 100 mM NaCl, pH 8.0, 0.5 mM Reduced Glutathione, 10% gly, 0.5 mM PMSF
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background

Lyn Protein, a non-receptor tyrosine-protein kinase, serves as a central mediator in transmitting signals from cell surface receptors, playing a crucial role in regulating innate and adaptive immune responses, hematopoiesis, growth factor and cytokine responses, integrin signaling, and the cellular response to DNA damage and genotoxic agents. Acting primarily as a negative regulator but also functioning as an activator depending on the cellular context, Lyn Protein is indispensable for initiating and terminating B-cell responses, influencing B-cell differentiation, proliferation, survival, apoptosis, and immune self-tolerance. It acts downstream of various immune receptors, including the B-cell receptor, CD79A, CD79B, CD5, CD19, CD22, FCER1, FCGR2, FCGR1A, TLR2, and TLR4, contributing to the inflammatory response to bacterial lipopolysaccharide. Lyn Protein also mediates responses to cytokines and growth factors in diverse hematopoietic cell types, playing a crucial role in integrin signaling. Its regulatory role encompasses cell proliferation, survival, differentiation, migration, adhesion, degranulation, and cytokine release. Lyn Protein down-regulates signaling pathways through phosphorylation of immunoreceptor tyrosine-based inhibitory motifs (ITIM), facilitating the recruitment of phosphatases such as PTPN6/SHP-1, PTPN11/SHP-2, and INPP5D/SHIP-1 to modulate signaling by dephosphorylation of kinases and substrates. Lyn Protein's multifaceted kinase activity extends to phosphorylating various substrates, including BTK, CBL, CD5, CD19, CD72, CD79A,

CD79B, CSF2RB, DOK1, HCLS1, LILRB3/PIR-B, MS4A2/FCER1B, SYK, and TEC, showcasing its intricate involvement in diverse signaling cascades. It is also involved in the phosphorylation of SIRPA, PTPN6/SHP-1, PTPN11/SHP-2, INPP5D/SHIP-1, BCR-ABL fusion protein, FER, KIT, LPXN, SCIMP, CLNK, BCAR1/CAS, and NEDD9/HEF1, illustrating its extensive regulatory capacity in various cellular processes.

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

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