

## Recombinant Mouse Lyn Protein, Myc/DDK-tagged

Cat. No. Lyn-3877M Lot. No. (See product label)

### SPECIFICATION

#### Product Overview

Purified recombinant protein of mouse full-length LYN proto-oncogene, Src family tyrosine kinase (Lyn), with C-terminal MYC/DDK tag, expressed in HEK293T cells.

#### Species

Mouse

#### Source

HEK293

#### Description

Non-receptor tyrosine-protein kinase that transmits signals from cell surface receptors and plays an important role in the regulation of innate and adaptive immune responses, hematopoiesis, responses to growth factors and cytokines, integrin signaling, but also responses to DNA damage and genotoxic agents. Functions primarily as negative regulator, but can also function as activator, depending on the context. Required for the initiation of the B-cell response, but also for its down-regulation and termination. Plays an important role in the regulation of B-cell differentiation, proliferation, survival and apoptosis, and is important for immune self-tolerance. Acts downstream of several immune receptors, including the B-cell receptor, CD79A, CD79B, CD5, CD19, CD22, FCER1, FCGR2, FCGR1A, TLR2 and TLR4. Plays a role in the inflammatory response to bacterial lipopolysaccharide. Mediates the responses to cytokines and growth factors in hematopoietic progenitors, platelets, erythrocytes, and in mature myeloid cells, such as dendritic cells, neutrophils and eosinophils. Acts downstream of EPOR, KIT, MPL, the chemokine receptor CXCR4, as well as the receptors for IL3, IL5 and CSF2. Plays an important role in integrin signaling. Regulates cell proliferation, survival, differentiation, migration, adhesion, degranulation, and cytokine release. Down-regulates signaling

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pathways by phosphorylation of immunoreceptor tyrosine-based inhibitory motifs (ITIM), that then serve as binding sites for phosphatases, such as PTPN6/SHP-1, PTPN11/SHP-2 and INPP5D/SHIP-1, that modulate signaling by dephosphorylation of kinases and their substrates. Phosphorylates LIME1 in response to CD22 activation. Phosphorylates BTK, CBL, CD5, CD19, CD72, CD79A, CD79B, CSF2RB, DOK1, HCLS1, LILRB3/PIR-B, MS4A2/FCER1B, SYK and TEC. Promotes phosphorylation of SIRPA, PTPN6/SHP-1, PTPN11/SHP-2 and INPP5D/SHIP-1. Required for rapid phosphorylation of FER in response to FCER1 activation. Mediates KIT phosphorylation. Acts as an effector of EPOR (erythropoietin receptor) in controlling KIT expression and may play a role in erythroid differentiation during the switch between proliferation and maturation. Depending on the context, activates or inhibits several signaling cascades. Regulates phosphatidylinositol 3-kinase activity and AKT1 activation. Regulates activation of the MAP kinase signaling cascade, including activation of MAP2K1/MEK1, MAPK1/ERK2, MAPK3/ERK1, MAPK8/JNK1 and MAPK9/JNK2. Mediates activation of STAT5A and/or STAT5B. Phosphorylates LPXN on 'Tyr-72'. Kinase activity facilitates TLR4-TLR6 heterodimerization and signal initiation. Phosphorylates SCIMP on 'Tyr-96'; this enhances binding of SCIMP to TLR4, promoting the phosphorylation of TLR4, and a selective cytokine response to lipopolysaccharide in macrophages. Phosphorylates CLNK.

**Molecular Mass** 58.8 kDa

**Purity** > 80% as determined by SDS-PAGE and Coomassie blue staining

**Stability** Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.

**Storage** Store at -80 centigrade after receiving vials.

**Concentration** >50 µg/mL as determined by microplate BCA method

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**Storage Buffer** 25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

## GENE INFORMATION

**Gene Name** Lyn LYN proto-oncogene, Src family tyrosine kinase [ *Mus musculus* (house mouse) ]

**Official Symbol** Lyn

**Synonyms** LYN; Yamaguchi sarcoma viral (v-yes-1) oncogene homolog; tyrosine-protein kinase Lyn; V-yes-1 Yamaguchi sarcoma viral related oncogene homolog; Hck-2; p53Lyn; p56Lyn; AA407514

**Gene ID** 17096

**mRNA Refseq** NM\_001111096

**Protein Refseq** NP\_001104566

**UniProt ID** P25911

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