

KD-Validated Anti-LYN Proto-Oncogene Rabbit Monoclonal Antibody

Rabbit monoclonal antibody

Catalog # AGI1621

Product Information

Application	WB, FC, ICC
Primary Accession	P07948
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	24GB720
Calculated MW	58574
Gene Name	LYN
Aliases	LYN Proto-Oncogene, Src Family Tyrosine Kinase; JTK8; V-Yes-1 Yamaguchi Sarcoma Viral Related Oncogene Homolog; Lck/Yes-Related Novel Protein Tyrosine Kinase; Tyrosine-Protein Kinase Lyn; EC 2.7.10.2; P53Lyn; P56Lyn; EC 2.7.10; SAIDV
Immunogen	A synthesized peptide derived from human Lyn

Additional Information

Gene ID	4067
Other Names	Tyrosine-protein kinase Lyn, 2.7.10.2, Lck/Yes-related novel protein tyrosine kinase, V-yes-1 Yamaguchi sarcoma viral related oncogene homolog, p53Lyn, p56Lyn, LYN, JTK8

Protein Information

Name	LYN
Synonyms	JTK8
Function	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. Involved in the regulation of endothelial activation, neutrophil adhesion and transendothelial migration (PubMed:[36932076](#)). Down-regulates signaling 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. Mediates phosphorylation of the BCR-ABL fusion protein. 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- 107'; this enhances binding of SCIMP to TLR4, promoting the phosphorylation of TLR4, and a selective cytokine response to lipopolysaccharide in macrophages (By similarity). Phosphorylates CLNK (By similarity). Phosphorylates BCAR1/CAS and NEDD9/HEF1 (PubMed:[9020138](#)).

Cellular Location

Cell membrane. Nucleus. Cytoplasm. Cytoplasm, perinuclear region. Golgi apparatus. Membrane; Lipid- anchor. Note=Accumulates in the nucleus by inhibition of CRM1-mediated nuclear export. Nuclear accumulation is increased by inhibition of its kinase activity. The trafficking from the Golgi apparatus to the plasma membrane occurs in a kinase domain-dependent but kinase activity independent manner and is mediated by exocytic vesicular transport. Detected on plasma membrane lipid rafts

Tissue Location

Detected in monocytes (at protein level). Detected in placenta, and in fetal brain, lung, liver and kidney. Widely expressed in a variety of organs, tissues, and cell types such as epidermoid, hematopoietic, and neuronal cells. Expressed in primary neuroblastoma tumors.

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