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Fyn Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52739

Product Information

Application	WB, ICC
Primary Accession	P06241
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Calculated MW	60762

Additional Information

Gene ID	2534
Other Names	C syn protooncogene;Fyn;FYN oncogene related to SRC FGR YES;FYN_HUMAN;MGC45350;OKT3 induced calcium influx regulator;P59 FYN;p59-Fyn;Protein tyrosine kinase fyn;Proto oncogene tyrosine protein kinase fyn;Proto-oncogene c-Fyn;Proto-oncogene Syn;Protooncogene Syn;SLK;Src like kinase;Src yes related novel gene;Src-like kinase;Src/yes related novel;Src/yes related novel gene;SYN;Tyrosine kinase p59fyn T;Tyrosine kinase p59fyn(T);Tyrosine-protein kinase Fyn.
Dilution	WB~~1:500 ICC~~1:50
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	FYN
Function	Non-receptor tyrosine-protein kinase that plays a role in many biological processes including regulation of cell growth and survival, cell adhesion, integrin-mediated signaling, cytoskeletal remodeling, cell motility, immune response and axon guidance (PubMed:11536198, PubMed:15489916, PubMed:15557120, PubMed:16387660, PubMed:20100835, PubMed:7568038, PubMed:7822789). Inactive FYN is phosphorylated on its C-terminal tail within the catalytic domain (PubMed:15489916). Following activation by PKA, the protein subsequently associates with PTK2/FAK1, allowing PTK2/FAK1 phosphorylation, activation and targeting to focal adhesions (PubMed:15489916). Involved in the regulation of cell adhesion and motility

	through phosphorylation of CTNNB1 (beta-catenin) and CTNND1 (delta-catenin) (PubMed:17194753). Regulates cytoskeletal remodeling by phosphorylating several proteins including the actin regulator WAS and the microtubule-associated proteins MAP2 and MAPT (PubMed:14707117, PubMed:15536091). Promotes cell survival by phosphorylating AGAP2/PIKE- A and preventing its apoptotic cleavage (PubMed:16841086). Participates in signal transduction pathways that regulate the integrity of the glomerular slit diaphragm (an essential part of the glomerular filter of the kidney) by phosphorylating several slit diaphragm components including NPHS1, KIRREL1 and TRPC6 (PubMed:14761972, PubMed:18258597, PubMed:19179337). Plays a role in neural processes by phosphorylating DPYSL2, a multifunctional adapter protein within the central nervous system, ARHGAP32, a regulator for Rho family GTPases implicated in various neural functions, and SNCA, a small pre-synaptic protein (PubMed:11162638, PubMed:12788081, PubMed:19652227). Involved in reelin signaling by mediating phosphorylation of DAB1 following reelin (RELN)- binding to its receptor (By similarity). Participates in the downstream signaling pathways that lead to T-cell differentiation and proliferation following T-cell receptor (TCR) stimulation (PubMed:22080863). Phosphorylates PTK2B/PYK2 in response to T-cell receptor activation (PubMed:20028775). Also participates in negative feedback regulation of TCR signaling through phosphorylation of PAG1 and PDCD1 (PubMed:18056706, PubMed:32184441). Phosphorylation of PAG1 promotes interaction between PAG1 and CSK and recruitment of CSK to lipid rafts (PubMed:18056706). Phosphorylation of PDCD1 leads to the recruitment of PTPN11/SHP-2 that mediates dephosphorylation of key TCR proximal signaling molecules (PubMed:32184441). CSK maintains LCK and FYN in an inactive form (By similarity). Promotes CD28-induced phosphorylation of VAV1 (PubMed:11005864). In mast cells, phosphorylates CLNK after activation of immunoglobulin epsilon receptor signaling (By similarity). Can also promote CD244-mediated NK cell activation (PubMed:15713798).
Cellular Location	Cytoplasm. Nucleus Cell membrane. Perikaryon {ECO:0000250|UniProtKB:Q62844} Note=Present and active in lipid rafts (PubMed:12218089) Palmitoylation is crucial for proper trafficking (PubMed:8206991)
Tissue Location	Isoform 1 is highly expressed in the brain. Isoform 2 is expressed in cells of hemopoietic lineages, especially T- lymphocytes.

Background

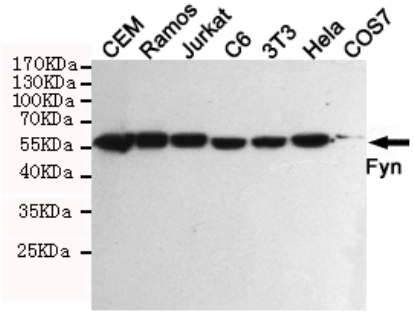
Non-receptor tyrosine-protein kinase that plays a role in many biological processes including regulation of cell growth and survival, cell adhesion, integrin-mediated signaling, cytoskeletal remodeling, cell motility, immune response and axon guidance. Inactive FYN is phosphorylated on its C-terminal tail within the catalytic domain. Following activation by PKA, the protein subsequently associates with PTK2/FAK1, allowing PTK2/FAK1 phosphorylation, activation and targeting to focal adhesions. Involved in the regulation of cell adhesion and motility through phosphorylation of CTNNB1 (beta-catenin) and CTNND1 (delta- catenin). Regulates cytoskeletal remodeling by phosphorylating several proteins including the actin regulator WAS and the microtubule-associated proteins MAP2 and MAPT. Promotes cell survival by phosphorylating AGAP2/PIKE-A and preventing its apoptotic cleavage. Participates in signal transduction pathways that regulate the integrity of the glomerular slit diaphragm (an essential part of the glomerular filter of the kidney) by phosphorylating several slit diaphragm components including NPHS1, KIRREL and TRPC6. Plays a role in neural processes by phosphorylating DPYSL2, a multifunctional adapter protein within the central nervous system, ARHGAP32, a regulator for Rho family GTPases implicated in various neural functions, and SNCA, a small pre-synaptic protein. Participates in the downstream signaling pathways that lead to T-cell differentiation and proliferation following T-cell receptor (TCR) stimulation. Also participates in negative feedback regulation of TCR signaling through phosphorylation of PAG1, thereby promoting interaction between PAG1 and CSK and recruitment of CSK to lipid rafts. CSK maintains LCK and FYN in an inactive form.

Promotes CD28-induced phosphorylation of VAV1.

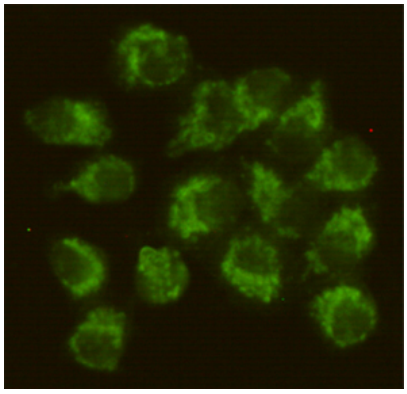
References

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Rigley K.,et al.J. Immunol. 154:1136-1145(1995).
Goshima N.,et al.Nat. Methods 5:1011-1017(2008).
Mungall A.J.,et al.Nature 425:805-811(2003).

Images



Western blot detection of Fyn in Hela,3T3,C6,COS7,CEM,Ramos and Jurkat cell lysates using Fyn mouse mAb (1:500 diluted).Predicted band size:59KDa.Observed band size:59KDa.



Immunocytochemistry staining of HeLa cells fixed with -20℃ Methanol and using Fyn mouse mAb (dilution 1:50).

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