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Fyn Rabbit pAb

Catalog # AP53551

Product Information

Primary Accession	P39688
Host	Rabbit
Clonality	Polyclonal Antibody
Calculated MW	60675

Additional Information

Gene ID	14360
Other Names	AI448320; AW552119
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:12218089, PubMed:12526739, PubMed:12640114, PubMed:12681493, PubMed:14999081, PubMed:8007959). Inactive FYN is phosphorylated on its C-terminal tail within the catalytic domain (By similarity). Following activation by PKA, the protein subsequently associates with PTK2/FAK1, allowing PTK2/FAK1 phosphorylation, activation and targeting to focal adhesions (By similarity). Involved in the regulation of cell adhesion and motility through phosphorylation of CTNNB1 (beta-catenin) and CTNND1 (delta-catenin) (PubMed:12640114). Regulates cytoskeletal remodeling by phosphorylating several proteins including the actin regulator WAS and the microtubule-associated proteins MAP2 and MAPT (By similarity). Promotes cell survival by phosphorylating AGAP2/PIKE-A and preventing its apoptotic cleavage (By similarity). 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 (By similarity). 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 (By similarity). Involved in reelin signaling by mediating phosphorylation of DAB1 following reelin (RELN)- binding to its receptor (PubMed:12526739). Participates in the downstream signaling pathways that

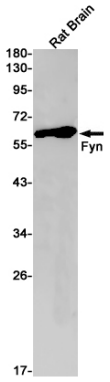
	lead to T-cell differentiation and proliferation following T-cell receptor (TCR) stimulation (By similarity). Phosphorylates PTK2B/PYK2 in response to T-cell receptor activation (By similarity). Also participates in negative feedback regulation of TCR signaling through phosphorylation of PAG1 and PDCD1 (By similarity). Phosphorylation of PAG1 promotes interaction between PAG1 and CSK and recruitment of CSK to lipid rafts (By similarity). Phosphorylation of PDCD1 leads to the recruitment of PTPN11/SHP-2 that mediates dephosphorylation of key TCR proximal signaling molecules (By similarity). CSK maintains LCK and FYN in an inactive form (PubMed:12218089). Promotes CD28-induced phosphorylation of VAV1 (By similarity). In mast cells, phosphorylates CLNK after activation of immunoglobulin epsilon receptor signaling (PubMed:12681493). Can also promote CD244-mediated NK cell activation (By similarity).
Cellular Location	Cytoplasm {ECO:0000250|UniProtKB:P06241}. Nucleus {ECO:0000250|UniProtKB:P06241}. Cell membrane. Perikaryon {ECO:0000250|UniProtKB:Q62844}. Note=Present and active in lipid rafts (PubMed:14645715). Palmitoylation is crucial for proper trafficking (By similarity). {ECO:0000250|UniProtKB:P06241, ECO:0000269|PubMed:14645715}
Tissue Location	Isoform 1 is highly expressed in the brain, isoform 2 is expressed in cells of hemopoietic lineages, especially T- lymphocytes.

Background

Swiss-Prot Acc.P39688.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, KIRREL1 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. Phosphorylates PTK2B/PYK2 in response to T-cell receptor activation. 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.

Images

Western blot detection of Fyn in Rat Brain lysates using Fyn Rabbit pAb(1:1000 diluted).Predicted band size:61kDa.Observed band size:61kDa.



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