abcam

ab1881

Anti-Fyn antibody [FYN-01]

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human Tyrosine-protein kinase Fyn aa 1-200. The exact immunogen used to generate this antibody is proprietary information. Database link P06241
Clone number	FYN-01
Purification technique	Affinity purification Protein A
Specificity	The antibody reacts with p59fyn (Fyn), a non receptor protein tyrosine kinase (59 kDa),which belongs to the Src family of cytoplasmic tyrosine kinases.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from hybridoma culture supernatant. Purity >95% by SDS-PAGE.

Reactivity data

ICC/IF

Tested

Species	Mouse

Dilution info	5 µg/mL
Notes	-

Species	Human
Dilution info	5 µg/mL
Notes	-

IP

Expected

Species	Mouse, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human
Dilution info	2 µg/mL
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information Tyrosine-protein kinase 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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Fyn is a Src family tyrosine kinase with a molecular weight of approximately 59 kDa. It is often referred to as Fyn kinase and plays a significant role in signal transduction processes. This protein is observed in various tissues with high expression in the brain T cells and platelets. Fyn kinase is known for its function in cell communication and regulates different cellular processes in these tissues.
Biological function summary	Fyn kinase influences cell growth differentiation and survival. It is a part of larger signaling complexes including those accountable for the development and function of the central nervous system. The protein's activity is important for neural plasticity and supports synaptic communication particularly within the brain. Fyn can interact with other proteins in these complexes to help direct cellular responses to external signals.
Pathways	Fyn kinase is central to several intracellular signaling pathways such as the T cell receptor (TCR) signaling pathway and the integrin signaling pathway. The TCR signaling pathway involves the regulation of immune responses while the integrin signaling pathway contributes to cell adhesion and migration. Other proteins like Lck and Yes interact with Fyn within these pathways adding another layer of regulation and response in various cell types.
Associated diseases and disorders	Fyn kinase has associations with Alzheimer's disease and certain types of cancer. In Alzheimer's dysregulation of Fyn activity contributes to synaptic dysfunction and neuronal damage. In cancer aberrant Fyn signaling can affect cellular proliferation and metastasis. Proteins such as Tau in Alzheimer's disease and Src in cancer relate to Fyn through their respective pathological processes.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

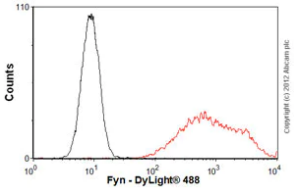
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

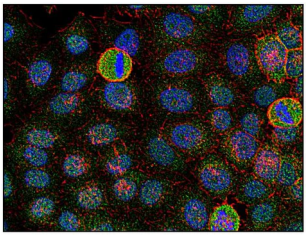
6 product images



Flow Cytometry - Anti-Fyn antibody [FYN-01] (ab1881)

Fyn Flow Cytometry staining using mouse Anti-Fyn antibody

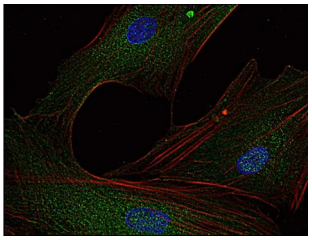
Overlay histogram showing Ramos cells stained with ab1881 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab1881, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (ab91366, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in Ramos cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunocytochemistry - Anti-Fyn antibody [FYN-01] (ab1881)

Fyn Immunocytochemistry staining using mouse Anti-Fyn antibody

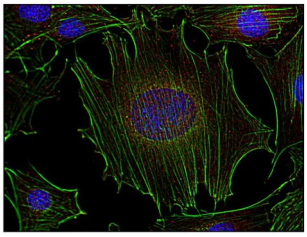
Immunocytochemistry analysis of Fyn in human HeLa cell line using ab1881 (green) at 5 µL. Actin cytoskeleton was decorated by phalloidin (red) and cell nuclei stained with DAPI (blue).



Immunocytochemistry - Anti-Fyn antibody [FYN-01] (ab1881)

Fyn Immunocytochemistry staining using mouse Anti-Fyn antibody

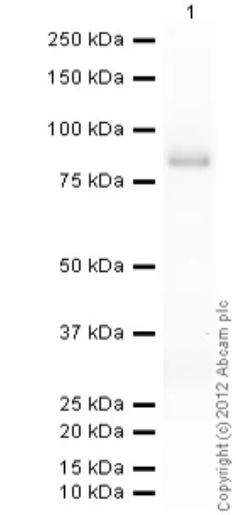
Immunofluorescence analysis of human primary fibroblasts labelling Fyn with ab1881 at 5 µL. Actin cytoskeleton was stained with phalloidin (red) and cell nuclei were stained with DAPI (blue).



Immunocytochemistry - Anti-Fyn antibody [FYN-01] (ab1881)

Fyn Immunocytochemistry staining using mouse Anti-Fyn antibody

Immunocytochemistry analysis of Fyn in murine transformed fibroblasts using ab1881 (red) at 5 µL. Actin cytoskeleton was decorated by phalloidin (green) and cell nuclei stained with DAPI (blue).



Western blot - Anti-Fyn antibody [FYN-01] (ab1881)

Fyn Western blot staining using mouse Anti-Fyn antibody

All lanes:
Western blot - Anti-Fyn antibody [FYN-01] (ab1881) at 1 µg/mL

All lanes:
Western blot - Recombinant human Fyn protein (GST tag N-Terminus) (ab84696) at 0.01 µg

Secondary

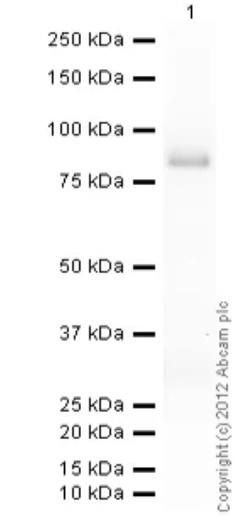
All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 60 kDa

Exposure time: 10s



Western blot - Anti-Fyn antibody [FYN-01] (ab1881)

Fyn Western blot staining using mouse Anti-Fyn antibody

All lanes:
Western blot - Anti-Fyn antibody [FYN-01] (ab1881) at 1 µg/mL

All lanes:
Western blot - Recombinant human Fyn protein (GST tag N-Terminus) (ab84696) at 0.01 µg

Secondary

All lanes:
Western blot - Goat Anti-Mouse IgG H&L (HRP) preadsorbed (ab97040) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 60 kDa

Exposure time: 10s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.