abcam

ab300118

Anti-Lyn (phospho Y397) antibody [EPR26354-1]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR26354-1
Purification technique	Affinity purification Protein A
Concentration	0.511 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Dot

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information LYN pY397

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).

Storage

Shipped at conditions	Conditional Ambient
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

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	Lyn kinase also known as p56 or Lyn protein is a member of the Src family of protein tyrosine kinases. It possesses a molecular weight of approximately 56 kDa. Lyn is mainly expressed in hematopoietic cells such as B-lymphocytes mast cells and myeloid cells. It plays a critical role in the signaling pathways involving these cells. Lyn is located on the inner surface of the plasma membrane and requires lipid modification for membrane association. Additionally it is present in neuronal tissues and other non-immune cell types reflecting a broader role in cellular signal transduction.
Biological function summary	As a regulator in signal transduction Lyn kinase is involved in the formation of protein complexes that modulate cell activation and proliferation. It participates in the phosphorylation of downstream substrates which leads to the initiation of various cellular responses. Lyn modulates pathways involving inflammation and immune responses impacting the development and function of immune cells. It is important for balancing activation and inhibition signals in the immune system ensuring a controlled immune response.
Pathways	Lyn kinase interacts with the B-cell receptor (BCR) signaling pathway and the Fc epsilon RI signaling pathway in mast cells. It associates with other Src family kinases like Fyn and Lck to regulate BCR signaling which influences B-cell development and differentiation. Lyn also acts upstream of pathways that control the release of inflammatory mediators. Through its role in these pathways Lyn

	indirectly impacts downstream processes and affects cellular communication and immune system homeostasis.
Associated diseases and disorders	Lyn dysfunction has implications for conditions like chronic myeloid leukemia and systemic lupus erythematosus. Abnormal Lyn activity alters signal transduction leading to unregulated cell proliferation and immune dysregulation. In chronic myeloid leukemia Lyn interacts with the BCR/ABL fusion protein contributing to the malignant transformation of hematopoietic cells. In systemic lupus erythematosus Lyn regulates signaling pathways that prevent autoimmunity; imbalances can lead to an excessive immune response. These connections highlight Lyn's importance in both cell regulation and its involvement in pathological states.

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

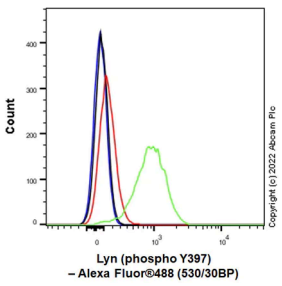
We do not recommend this combination. It is not covered by our product promise.

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



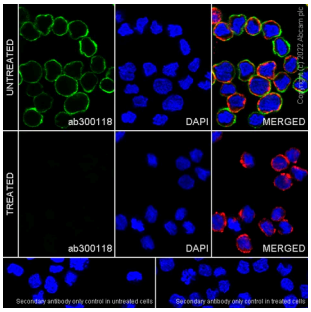
Flow Cytometry (Intracellular) - Anti-Lyn (phospho Y397) antibody [EPR26354-1] (ab300118)

Lyn (phospho Y397) Flow Cytometry (Intracellular) staining of COLO 201 (Human colon adenocarcinoma) using rabbit Anti-Lyn (phospho Y397) antibody

Flow cytometric analysis of 4% Paraformaldehyde fixed 90% Methanol permeabilized COLO 201 (Human colon adenocarcinoma) 200nM Dasatinib for 24 hours (Red) / Untreated control (Green) cells labelling Lyn (phospho Y397) with ab300118 at 1/500 compared with a Rabbit monoclonal IgG (ab172730) / Black isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 was used as the secondary antibody.

Dasatinib treatment inhibit the phosphorylation of Lyn at Y397 (PMID: 18451159).



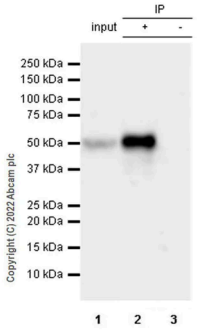
Immunocytochemistry/ Immunofluorescence - Anti-Lyn (phospho Y397) antibody [EPR26354-1] (ab300118)

Lyn (phospho Y397) Immunocytochemistry/ Immunofluorescence staining of COLO 201 (human derived from metastatic site ascites bipolar, slightly refractile, fibroblast-like cell) using rabbit Anti-Lyn (phospho Y397) antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized COLO 201 (human derived from metastatic site ascites bipolar, slightly refractile, fibroblast-like cell) cells labelling Lyn (phospho Y397) with ab300118 at 1/50 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed (ab150081) antibody at 1/1000 dilution (Green).

Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) (ab195889) was used to counterstain tubulin at 1/200 dilution. The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed (ab150081) at 1/1000 dilution.



Immunoprecipitation - Anti-Lyn (phospho Y397) antibody [EPR26354-1] (ab300118)

Lyn (phospho Y397) was immunoprecipitated from 0.35 mg COLO 205 whole cell lysate with ab300118 at 1/30 dilution. Western blot was performed on the immunoprecipitate using ab300118 at 1/1000 dilution.
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-Lyn (phospho Y397) antibody [EPR26354-1] (ab300118) at 1/1000 dilution

Lane 1:
COLO 205 (human colorectal adenocarcinoma cell) whole cell lysate at 10 µg

Lane 2:
ab300118 at 1/30 IP in COLO 205 whole cell lysate at 10 µg

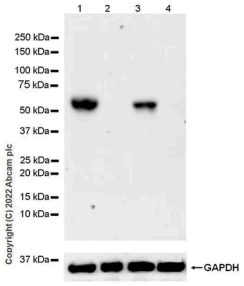
Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab300118 in COLO 205 whole cell lysate at 10 µg

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Observed band size: 60 kDa

Exposure time: 15s



Western blot - Anti-Lyn (phospho Y397) antibody [EPR26354-1] (ab300118)

Lyn (phospho Y397) Western blot staining using rabbit Anti-Lyn (phospho Y397) antibody

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining.

Dasatinib treatment inhibits the phosphorylation of Lyn at Y397 (PMID: 18451159). The antibody may cross-react with phosphorylated HCK(Tyr411), LCK(Tyr394), BLK(Tyr389), Src(Tyr416), Fyn(Tyr420) and Yes(Tyr426).

All lanes:
Western blot - Anti-Lyn (phospho Y397) antibody [EPR26354-1] (ab300118) at 1/1000 dilution

Lane 1:
Untreated COLO 201 (human colorectal adenocarcinoma cell) whole cell lysate at 40 µg

Lane 2:
COLO 201 treated with 200 nM Dasatinib for 24 hours, whole cell lysate at 40 µg

Lane 3:
Untreated COLO 205 (human colorectal adenocarcinoma cell) whole cell lysate at 40 µg

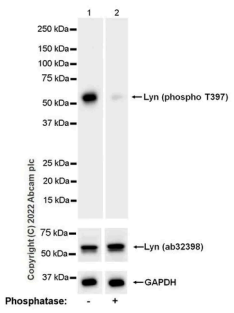
Lane 4:
COLO 205 treated with 200 nM Dasatinib for 24 hours, whole cell lysate at 40 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 58 kDa

Exposure time: 26s



Western blot - Anti-Lyn (phospho Y397) antibody [EPR26354-1] (ab300118)

Lyn (phospho Y397) Western blot staining using rabbit Anti-Lyn (phospho Y397) antibody

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining.

All lanes:
Western blot - Anti-Lyn (phospho Y397) antibody [EPR26354-1] (ab300118) at 1/1000 dilution

Lane 1:
COLO 205 (human colorectal adenocarcinoma cell) whole cell lysate at 20 µg

Lane 2:

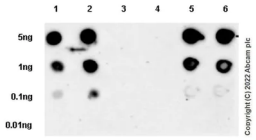
COLO 205 (human colorectal adenocarcinoma cell) whole cell lysate (phosphatase treated membrane) at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 58 kDa

Exposure time: 26s



Dot Blot - Anti-Lyn (phospho Y397) antibody [EPR26354-1] (ab300118)

Lyn (phospho Y397) Dot Blot staining using rabbit Anti-Lyn (phospho Y397) antibody

Dot blot analysis of Lyn (phospho Y397) using ab300118 at 1/1000 followed by a Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution.

This antibody cross-reacts with human YES (phospho T426), FYN (phospho T420), SRC (phospho T419), and Human LCK (phospho T394), but does not react with Human BLK (phospho T389).

All lanes:
Dot Blot - Anti-Lyn (phospho Y397) antibody [EPR26354-1] (ab300118) at 1/1000 dilution

Lane 1:
Human Lyn (phospho Y397) peptide a

Lane 2:
Human Lyn (phospho Y397) peptide b

Lane 3:
Human Lyn non-phospho peptide

Lane 4:
Human BLK (phospho T389) peptide

Lane 5:
Human YES (phospho T426)/ FYN (phospho T420)/ SRC (phospho T419) peptide

Lane 6:
Human LCK (phospho T394) peptide

Secondary

All lanes:
Dot Blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Exposure time: 3min

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