abcam

ab205200

Anti-STYX antibody [EPR16314]

Recombinant | RabMAb

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
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR16314
Purification technique	Affinity purification Protein A
Concentration	0.34 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/150
Notes	-

Expected

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

Target data

See full target information Serine/threonine/tyrosine-interacting protein

Function	Catalytically inactive phosphatase (PubMed:23847209). Acts as a nuclear anchor for MAPK1/MAPK3 (ERK1/ERK2) (PubMed:23847209). Modulates cell-fate decisions and cell migration by spatiotemporal regulation of MAPK1/MAPK3 (ERK1/ERK2) (PubMed:23847209). By binding to the F-box of FBXW7, prevents the assembly of FBXW7 into the SCF E3 ubiquitin-protein ligase complex, and thereby inhibits degradation of its substrates (PubMed:28007894). Plays a role in spermatogenesis (By similarity).

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	The protein STYX (Serine/threonine/tyrosine-interacting protein) also known as PTPN23 functions as a pseudo-phosphatase meaning it has structural resemblance to phosphatases but lacks catalytic activity. STYX acts by binding to substrates and competing with active phosphatases. The molecular mass of STYX is approximately 55 kDa. Expression of STYX occurs widely found in tissues such as brain heart and testis as well as in various transformed cell lines.
Biological function summary	STYX contributes to cellular processes like signal transduction and development by modulating signaling pathways through its interaction with phosphorylated tyrosines. Although not part of a functional enzyme complex due to its pseudo-activity STYX interacts with components involved in kinase signaling. These interactions can act as a regulatory mechanism impacting various cellular functions.
Pathways	STYX influences several signaling cascades particularly the MAPK and Wnt pathways. It exerts its effects by interacting with proteins such as MAP kinase kinase (MEK) and β-catenin integral components of these pathways. Through these interactions STYX affects cell proliferation differentiation and apoptosis indicating its important role in cellular communication and response mechanisms.
Associated diseases and disorders	Aberrant regulation of STYX associates with cancer and neurodegenerative diseases. In cancer overexpression or mutation of STYX can impact the MAPK pathway leading to dysregulation of cell division and growth. Additionally in neurodegenerative disorders like Alzheimer's disease altered STYX function relates to abnormal phosphorylation states and interactions with proteins such as Tau contributing to disease pathology.

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.

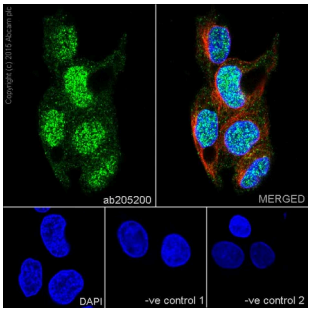
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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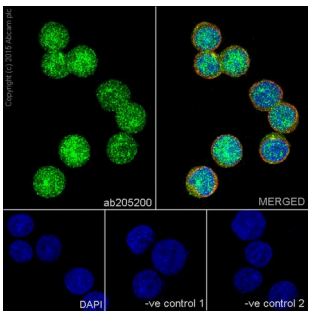
9 product images



Immunocytochemistry/ Immunofluorescence - Anti-STYX antibody [EPR16314] (ab205200)

STYX Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-STYX antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized HepG2 (Human liver hepatocellular carcinoma) cells labeling STYX with ab205200 at 1/100 dilution followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear and weakly cytoplasmic staining on HepG2 cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).
The negative controls are as follows:
-ve control 1: ab205200 at 1/100 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.

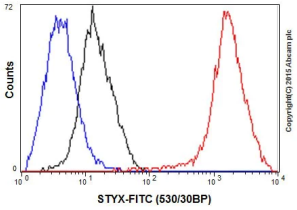


Immunocytochemistry/ Immunofluorescence - Anti-STYX antibody [EPR16314] (ab205200)

STYX Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-STYX antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized Jurkat (Human T cell leukemia cells from peripheral blood) cells labeling STYX with ab205200 at 1/100 dilution followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody

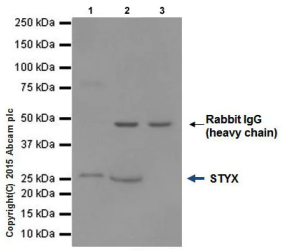
at 1/1000 dilution (green). Confocal image showing nuclear and weakly cytoplasmic staining on Jurkat cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).
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Flow Cytometry (Intracellular) - Anti-STYX antibody [EPR16314] (ab205200)

STYX Flow Cytometry (Intracellular) staining using rabbit Anti-STYX antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed Jurkat (Human T cell leukemia cells from peripheral blood) cells labeling STYX with ab205200 at 1/150 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/500 dilution was used as the secondary antibody.

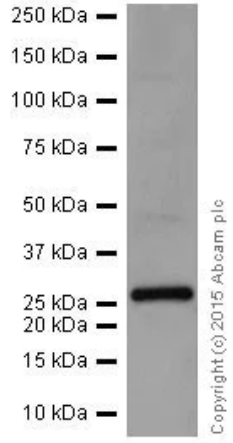


Immunoprecipitation - Anti-STYX antibody [EPR16314] (ab205200)

STYX was immunoprecipitated from 1mg of NIH/3T3 (Mouse embyro fibroblast cells) whole cell lysate with ab205200 at 1/50 dilution. Western blot was performed from the immunoprecipitate using ab205200 at 1/1000 dilution. Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG, was used as secondary antibody at 1/1500 dilution.
Lane 1: NIH/3T3 whole cell lysate 10ug (Input). Lane 2: ab205200 IP in NIH/3T3 whole cell lysate. Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab205200 in NIH/3T3 whole cell lysate.
Blocking and dilution buffer and concentration: 5% NFDM/TBST.
Exposure time: 30 seconds.

All lanes:
Immunoprecipitation - Anti-STYX antibody [EPR16314] (ab205200)

Predicted band size: 25 kDa



Western blot - Anti-STYX antibody [EPR16314] (ab205200)

STYX Western blot staining of Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysate using rabbit Anti-STYX antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-STYX antibody [EPR16314] (ab205200) at 1/5000 dilution

All lanes:
Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysate at 20 µg

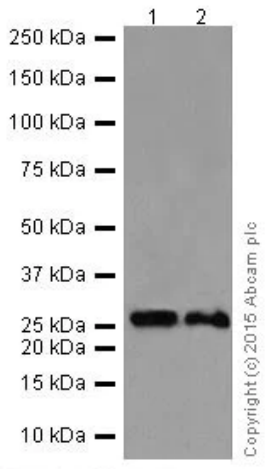
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 25 kDa

Observed band size: 25 kDa

Exposure time: 1min



Western blot - Anti-STYX antibody [EPR16314] (ab205200)

STYX Western blot staining using rabbit Anti-STYX antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-STYX antibody [EPR16314] (ab205200) at 1/1000 dilution

Lane 1:
HepG2 (Human liver hepatocellular carcinoma) whole cell lysate at 20 µg

Lane 2:
Human fetal liver lysate at 20 µg

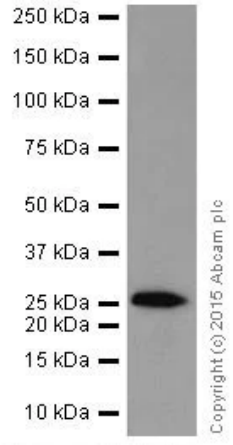
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 25 kDa

Observed band size: 25 kDa

Exposure time: 1min



Western blot - Anti-STYX antibody [EPR16314] (ab205200)

STYX Western blot staining of Human lymph node lysate using rabbit Anti-STYX antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-STYX antibody [EPR16314] (ab205200) at 1/1000 dilution

All lanes:
Human lymph node lysate at 20 µg

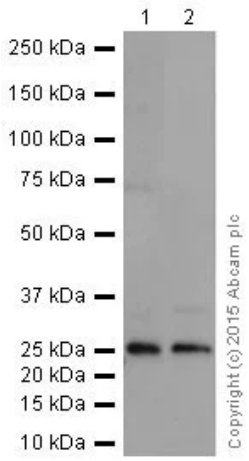
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 25 kDa

Observed band size: 25 kDa

Exposure time: 3min



Western blot - Anti-STYX antibody [EPR16314] (ab205200)

STYX Western blot staining using rabbit Anti-STYX antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-STYX antibody [EPR16314] (ab205200) at 1/1000 dilution

Lane 1:
Mouse spleen lysate at 10 µg

Lane 2:
Rat spleen lysate at 10 µg

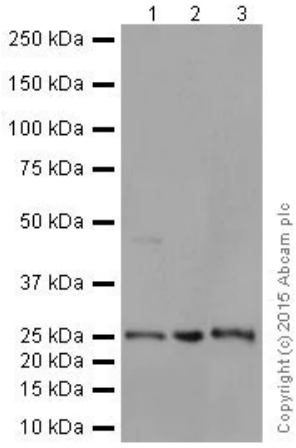
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 25 kDa

Observed band size: 25 kDa

Exposure time: 1min



Western blot - Anti-STYX antibody [EPR16314] (ab205200)

STYX Western blot staining using rabbit Anti-STYX antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-STYX antibody [EPR16314] (ab205200) at 1/1000 dilution

Lane 1:
C6 (Rat glial tumor cells) whole cell lysate at 10 µg

Lane 2:
RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Lane 3:
NIH/3T3 (Mouse embyro fibroblast cells) whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 25 kDa

Observed band size: 25 kDa

Exposure time: 10s

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