abcam

ab200341

Anti-STAT5a + STAT5b antibody [EPR16668]

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
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR16668
Purification technique	Affinity purification Protein A
Concentration	0.453 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Rat
Dilution info	1/200 - 1/10000
Notes	-

Species	Mouse

Dilution info	1/200 - 1/10000
Notes	-

Species	Recombinant full length protein - Human
Dilution info	1/200 - 1/10000
Notes	-

Species	Recombinant full length protein - Mouse
Dilution info	1/200 - 1/10000
Notes	-

Species	Human
Dilution info	1/200 - 1/10000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Species	Rat
Dilution info	1/500
Notes	-

Expected

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

Not recommended

Species	Recombinant full length protein - Human, Recombinant full length protein - Mouse

Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/80
Notes	-

Expected

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

Not recommended

Species	Recombinant full length protein - Human, Recombinant full length protein - Mouse
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Species	Rat
Dilution info	1/100
Notes	-

Species	Human
Dilution info	1/100

Notes	-

Not recommended

Species	Recombinant full length protein - Human, Recombinant full length protein - Mouse
Dilution info	-
Notes	-

Target data

See full target information STAT5A

Function	Carries out a dual function: signal transduction and activation of transcription. Mediates cellular responses to the cytokine KITLG/SCF and other growth factors. Mediates cellular responses to ERBB4. May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4. Binds to the GAS element and activates PRL-induced transcription. Regulates the expression of milk proteins during lactation.

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	STAT5a and STAT5b known jointly as members of the Signal Transducers and Activators of Transcription family play critical roles as transcription factors. They have molecular masses of approximately 94 kDa and 92 kDa respectively. These proteins share significant sequence similarity and are expressed in a wide range of tissues including hematopoietic cells liver and mammary glands. STAT5 proteins become activated in response to cytokines and growth factors where they dimerize and translocate to the cell nucleus to regulate gene expression.
Biological function summary	They are involved in mediating cytokine signaling by forming homo- or heterodimers upon phosphorylation by Janus kinases (JAKs). In the cytoplasm the formation of these dimers allows STAT5 to interact with DNA in the nucleus leading to the transcription of various genes important for cell proliferation differentiation and apoptosis. STAT5 has a significant role in cell cycle control and immune responses. The dimerization process involves complex formation and is an important part of its intracellular signaling cascade.
Pathways	STAT5a and STAT5b operate prominently within the JAK-STAT pathway. They are activated by proteins such as IL-2 IL-3 and Growth Hormone leading to transcriptional activity that affects growth and survival across various cell types. Besides the JAK-STAT pathway STAT5 interacts closely with the PI3K/AKT pathway thereby linking to cell survival signals. The cross-talk between these pathways enables fine-tuning of cellular responses to external stimuli and integrates signals from diverse receptors and ligands.
Associated diseases and disorders	STAT5 deregulated activity associates with various cancers such as leukemia and breast cancer due to its role in promoting excessive cell proliferation and survival. Abnormal activity in STAT5 can also contribute to disorders like autoimmune diseases due to its impact on immune cell regulation. In diseases like these STAT5 interacts notably with proteins such as BCL-2 and MYC which are critical modulators of cell death and growth pathways. Understanding the involvement of STAT5 in disease mechanisms provides opportunities for developing targeted therapeutics.

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.

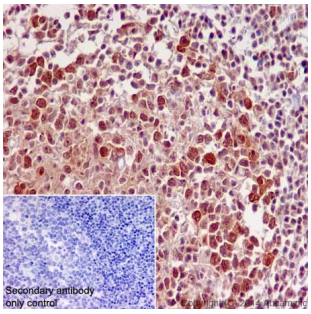
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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:
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10 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341)

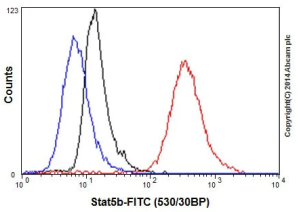
STAT5a + STAT5b Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-STAT5a + STAT5b antibody

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling STAT5b with ab200341 at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Cytoplasm and nuclear staining on Human tonsil tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

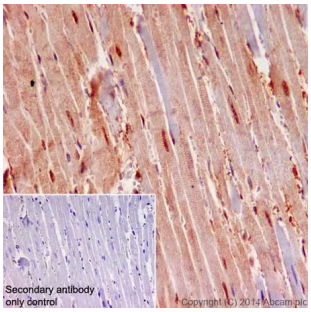


Flow Cytometry (Intracellular) - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341)

STAT5a + STAT5b Flow Cytometry (Intracellular) staining using rabbit Anti-STAT5a + STAT5b antibody

Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed NIH/3T3 (Mouse embyro fibroblast cells) cells labeling STAT5b with ab200341 at 1/80 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 1/150 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341)

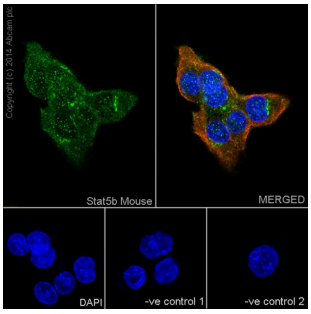
STAT5a + STAT5b Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-STAT5a + STAT5b antibody

Immunohistochemical analysis of paraffin-embedded Rat cardiac muscle tissue labeling STAT5b with ab200341 at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Cytoplasm and nuclear staining on rat cardiac muscle tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341)

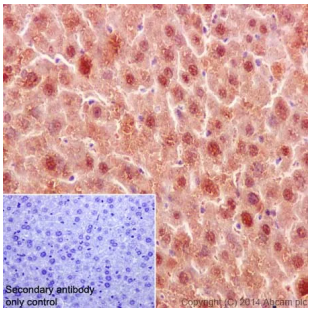
STAT5a + STAT5b Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-STAT5a + STAT5b antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized C6 (Rat glial tumor cells) cells labeling STAT5b with ab200341 at 1/500 dilution followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green).
Nuclear and cytoplasm staining on C6 cell line is observed.

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 1/500 dilution (red).

The negative controls are as follows:
-ve control 1: ab200341 at 1/500 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 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 1/500 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341)

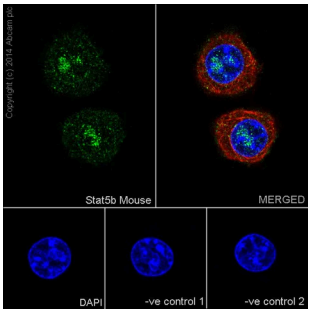
STAT5a + STAT5b Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-STAT5a + STAT5b antibody

Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling STAT5b with ab200341 at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Cytoplasm and nuclear staining on mouse liver tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



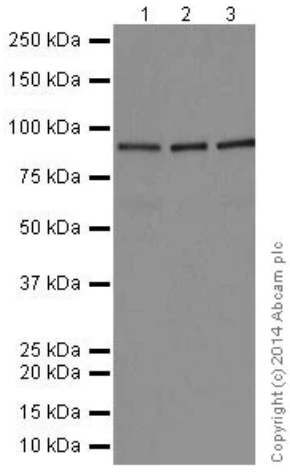
Immunocytochemistry/ Immunofluorescence - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341)

STAT5a + STAT5b Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-STAT5a + STAT5b antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) cells labeling STAT5b with ab200341 at 1/500 dilution followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green).
Nuclear and cytoplasm staining on RAW 264.7 cell line is observed.

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 1/500 dilution (red).

The negative controls are as follows:
-ve control 1: ab200341 at 1/500 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 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 1/500 dilution.



Western blot - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341)

STAT5a + STAT5b Western blot staining using rabbit Anti-STAT5a + STAT5b antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341) at 1/1000 dilution

Lane 1:
K562 (Human chronic myelogenous leukemia cells from bone marrow) whole cell lysate at 10 µg

Lane 2:
Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysate at 10 µg

Lane 3:
Daudi (Human Burkitt's lymphoma cell line) whole cell lysate at 10 µg

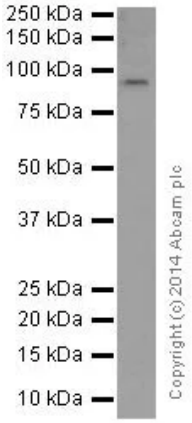
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 90 kDa

Observed band size: 90 kDa

Exposure time: 3min



Western blot - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341)

STAT5a + STAT5b Western blot staining of Full length human Stat5a recombinant protein using rabbit Anti-STAT5a + STAT5b antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
ab200341 show cross reactivity with STAT5a. Full length human Stat5a recombinant protein contains aa1-794 with MYC/DDDDK tag.

All lanes:
Western blot - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341) at 1/200 dilution

All lanes:
Full length human Stat5a recombinant protein at 0.01 µg

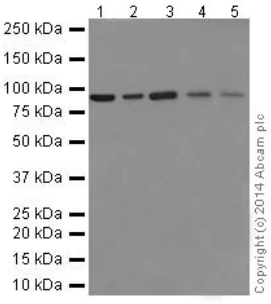
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 90 kDa

Observed band size: 90 kDa

Exposure time: 3min



Western blot - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341) at 1/1000 dilution

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

Lane 2:
PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysate at 10 µg

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

Lane 4:
Mouse heart lysate at 10 µg

Lane 5:
Rat heart lysate at 10 µg

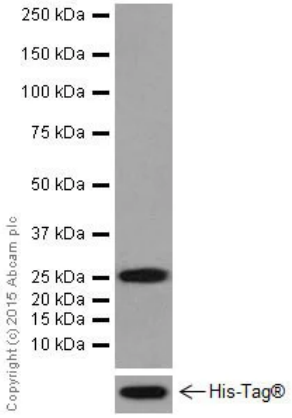
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 90 kDa

Observed band size: 90 kDa

Exposure time: 3min



Western blot - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-STAT5a + STAT5b antibody [EPR16668] (ab200341) at 1/10000 dilution

All lanes:
Recombinant protein fragment mouse Stat5b at 0.01 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 90 kDa

Exposure time: 3min

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