abcam

ab194898

Anti-STAT5a + STAT5b antibody [EPR16671-40]

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	EPR16671-40
Purification technique	Affinity purification Protein A
Concentration	1.485 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Recombinant full length protein - Human
Dilution info	1/2000
Notes	-

Species	Mouse

Dilution info	1/2000
Notes	-

Species	Rat
Dilution info	1/2000
Notes	-

Species	Human
Dilution info	1/2000
Notes	-

IP

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

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

Not recommended

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

ICC/IF

Tested

Species	Human
Dilution info	1/250

Notes	-

Expected

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

Not recommended

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/80
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Not recommended

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

IHC-P

Tested

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

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

Target data

See full target information STAT5B

Function	Carries out a dual function: signal transduction and activation of transcription (PubMed:29844444). Mediates cellular responses to the cytokine KITLG/SCF and other growth factors. Binds to the GAS element and activates PRL-induced transcription. Positively regulates hematopoietic/erythroid differentiation.

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

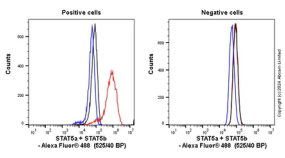
We do not recommend this combination. It is not covered by our product promise.

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:
Terms & Conditions.

13 product images



Flow Cytometry (Intracellular) - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)

STAT5a + STAT5b Flow Cytometry (Intracellular) staining of K-562 cells using rabbit Anti-STAT5a + STAT5b antibody

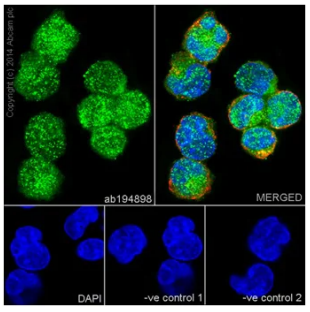
Flow cytometry overlay histogram showing left K-562 positive cells and right negative PC3 stained with ab194898 (red line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS containing 10% normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab194898) (1x 10^6in 100µl at 0.04µg/ml (1/12500)) for 30min at 22°C.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min at 22°C

Isotype control antibody (black line) was Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.

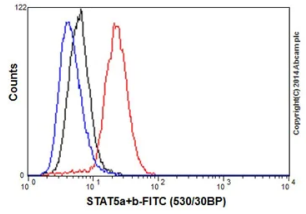
This antibody gave a positive signal in K-562 Fixed with 80% methanol (5 min) / permeabilised with 0.1% PBS-Triton X-100 for 15 min under the same conditions.



Immunocytochemistry/ Immunofluorescence - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)

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

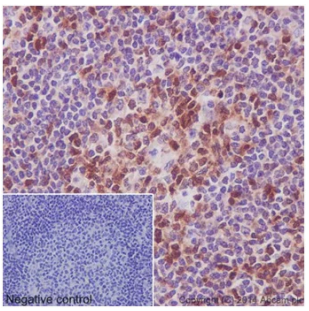
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized K562 (Human chronic myelogenous leukemia cells from bone marrow) cells labeling STAT5a + STAT5b with ab194898 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/400 dilution (green). Confocal image showing both cytoplasmic and nuclear staining on K562 cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/500 dilution and ab150120 (AlexaFluor® 594 Goat anti-Mouse secondary) at 1/500 dilution (red).
The negative controls are as follows:
1. ab194898 at 1/250 dilution followed by ab150120 (Alexa Fluor® 594 Goat anti-Mouse secondary) at 1/500 dilution.
2. ab7291 (anti-Tubulin mouse mAb) at 1/500 dilution followed by ab150077 (Alexa Fluor® 488 Goat Anti-Rabbit IgG H&L) at 1/400 dilution.



Flow Cytometry (Intracellular) - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)

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

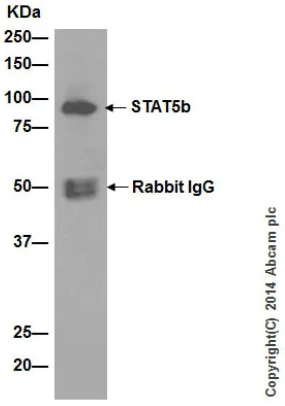
Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed K562 (Human chronic myelogenous leukemia cells from bone marrow) cells labeling STAT5a +STAT5b with ab194898 at 1/80 dilution (red) compared with a rabbit monoclonal IgG isotype control (black) and a unlabelled control (cells without 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 [EPR16671-40] (ab194898)

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

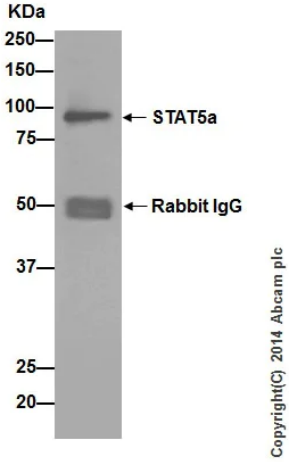
Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling STAT5a + STAT5b using ab194898 at 1/2000 dilution. A Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 was used as secondary. Counter stained with Hematoxylin.
Inset image: negative control obtained using PBS instead of ab194898.
Nuclear and weak cytoplasmic staining on lymphocytes of human tonsil is observed.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)

STAT5a + STAT5b were co-immunoprecipitated from 1mg of K562 (Human chronic myelogenous leukemia cells from bone marrow) cells with ab194898 at 1/100 dilution. Western blot was performed from the immunoprecipitate using ab178941 (Rabbit monoclonal [EPR16671] to STAT5b) at 1/1000 dilution. Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated, was used as secondary antibody at 1/1000 dilution.
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

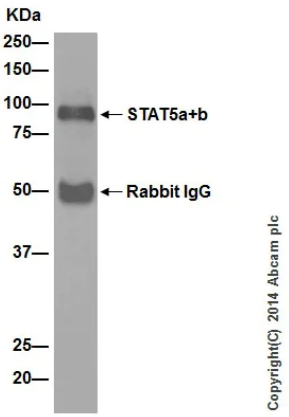
All lanes:
Immunoprecipitation - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)



Immunoprecipitation - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)

STAT5a + STAT5b were co-immunoprecipitated from 1mg of K562 (Human chronic myelogenous leukemia cells from bone marrow) cells with ab194898 at 1/100 dilution. Western blot was performed from the immunoprecipitate using ab32043 (Rabbit monoclonal [E289] to STAT5a) at 1/1000 dilution. Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated, was used as secondary antibody at 1/1000 dilution.
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

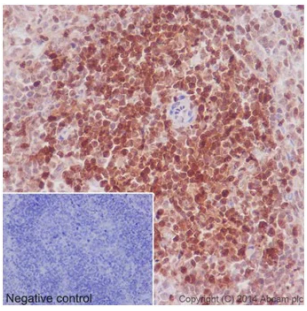
All lanes:
Immunoprecipitation - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)



Immunoprecipitation - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)

STAT5a and STAT5b were immunoprecipitated from 1mg of K562 (Human chronic myelogenous leukemia cells from bone marrow) cells with ab194898 at 1/100 dilution. Western blot was performed from the immunoprecipitate using ab194898 at 1/1000 dilution. Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated, was used as secondary antibody at 1/1000 dilution.
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

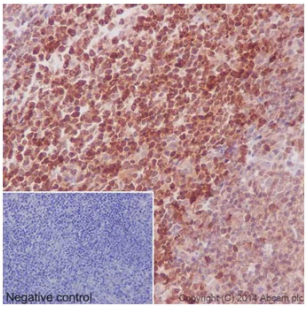
All lanes:
Immunoprecipitation - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)

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

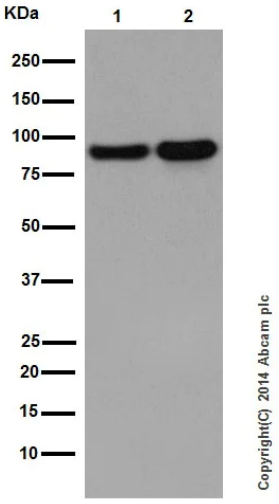
Immunohistochemical analysis of paraffin-embedded rat spleen tissue labeling STAT5a + STAT5b using ab194898 at 1/2000 dilution. A Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 was used as secondary. Counter stained with Hematoxylin.
Inset image: negative control obtained using PBS instead of ab194898.
Nuclear and weak cytoplasmic staining on lymphocytes of rat spleen is observed.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)

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

Immunohistochemical analysis of paraffin-embedded mouse spleen tissue labeling STAT5a + STAT5b using ab194898 at 1/2000 dilution. A Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 was used as secondary. Counter stained with Hematoxylin.
Inset image: negative control obtained using PBS instead of ab194898.
Nuclear and weak cytoplasmic staining on lymphocytes of mouse spleen is observed.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)

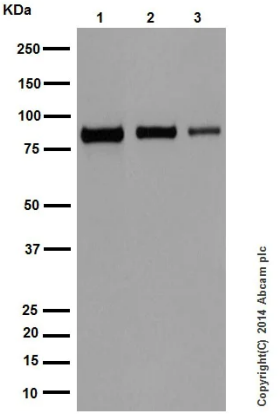
Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898) at 1/2000 dilution

Lane 1:
Human fetal heart lysates at 10 µg

Lane 2:
Human fetal kidney lysates at 10 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution



Western blot - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)

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 [EPR16671-40] (ab194898) at 1/20000 dilution

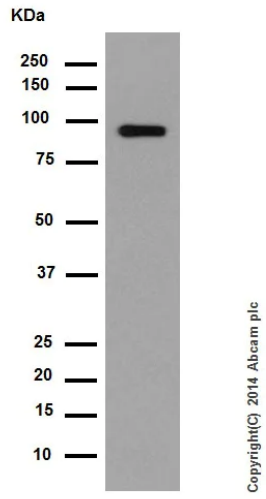
Lane 1:
K562 (Human chronic myelogenous leukemia cells from bone marrow) whole cell lysates at 20 µg

Lane 2:
Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysates at 20 µg

Lane 3:
Daudi (Human Burkitt's lymphoma cell line) whole cell lysates at 20 µg

Secondary

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



Western blot - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)

STAT5a + STAT5b Western blot staining of Human STAT5A full length recombinant protein using rabbit Anti-STAT5a + STAT5b antibody

Recombinant human C-terminal Myc/DDK tagged full length STAT5A from a commercial source.
Blocking/Dilution buffer: 5% NFDM/TBST.

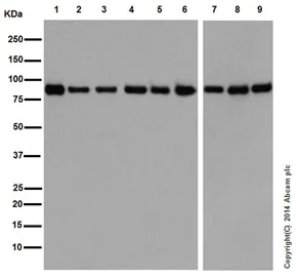
All lanes:
Western blot - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898) at 1/1000 dilution

All lanes:
Human STAT5A full length recombinant protein at 10 µg

Secondary

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

Predicted band size: 126 kDa, 57 kDa



Western blot - Anti-STAT5a + STAT5b antibody [EPR16671-40] (ab194898)

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 [EPR16671-40] (ab194898) at 1/2000 dilution

Lane 1:
mouse heart lysates at 10 µg

Lane 2:
mouse kidney lysates at 10 µg

Lane 3:
mouse spleen lysates at 10 µg

Lane 4:
rat brain lysates at 10 µg

Lane 5:
rat heart lysates at 10 µg

Lane 6:
rat spleen lysates at 10 µg

Lane 7:
RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysates at 10 µg

Lane 8:
PC12 (Rat adrenal gland pheochromocytoma) whole cell lysates at 10 µg

Lane 9:
NIH3T3 (Mouse embyro fibroblast cells) whole cell lysates at 10 µg

Secondary

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

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