abcam

ab32043

Anti-STAT5a antibody [E289]

Anti-STAT5a antibody [E289] (ab32043) is a rabbit monoclonal antibody detecting STAT5a in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 30 publications
- Trusted since 2006

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	E289
Purification technique	Affinity purification Protein A
Specificity	The antibody recognises Stat5a. It does not cross-react with other Stat family members.
Concentration	0.139 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/20
Notes	**For unpurified use at 1/80.**

Expected

Species	Mouse
Dilution info	1/20
Notes	**For unpurified use at 1/80.**

Species	Rat
Dilution info	1/20
Notes	**For unpurified use at 1/80.**

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

Expected

Species	Rat
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	-

Expected

Species	Mouse
Dilution info	1/100 - 1/500
Notes	-

Species	Rat
Dilution info	1/100 - 1/500
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.For unpurified use at 1/10.

Expected

Species	Mouse
Dilution info	1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.For unpurified use at 1/10.

Species	Rat
Dilution info	1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.For unpurified use at 1/10.

IHC-P

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
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

What is this antibody validated in?
Anti-STAT5a antibody [E289] (ab32043) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of STAT5a?
Anti-STAT5a [E289] (ab32043) specifically detects a band for STAT5a (UniProt: P42229) at a molecular weight of 91kDa.

Trusted by the scientific community
Anti-STAT5a [E289] (ab32043) was first used in a scientific publication in 2006 and has been cited over 30 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [E289] also available for your convenience: ab32043, Alexa Fluor® 647 - ab194309, PE - ab211686, Carrier free - ab213219, Alexa Fluor® 594 - ab214839, Alexa Fluor® 555 - ab279325

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

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 also known as Signal Transducer and Activator of Transcription 5A acts as a transcription factor in the cell. STAT5a weighs approximately 90 kDa and expresses in various tissues including the liver muscle and hematopoietic cells. It plays a central role in mediating cellular responses to cytokines and growth factors particularly those in the interleukin-2 (IL-2) family and growth hormone (GH).
Biological function summary	Many systems use STAT5a to regulate cell proliferation differentiation and survival. It often forms a complex with other proteins like STAT5b which is a closely related counterpart and both contribute to similar cellular processes. STAT5a can dimerize upon activation allowing it to move to the cell nucleus to influence gene expression directly.

Pathways	Researchers place STAT5a prominently in the JAK-STAT signaling pathway. This pathway is essential for transmitting information received from extracellular chemical signals to the cell nucleus resulting in the activation of genes controlling cellular functions. STAT5a works together with Janus kinases (JAKs) to mediate various biological responses including hormone signaling and immune function. It also interacts with proteins like IL-2 receptor subunits which are involved in many cytokine-driven processes.
Associated diseases and disorders	Disturbances in STAT5a activity link specifically with conditions like leukemia and breast cancer. Overactivation or mutation can lead to uncontrolled cell growth and survival contributing to these diseases. In leukemia STAT5a frequently partners with other proteins like BCR-ABL which is known for its role in chronic myeloid leukemia influencing oncogenic pathways. In breast cancer alterations in STAT5a signaling may interact with estrogen and progesterone receptors affecting tumor progression and response to therapies.

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

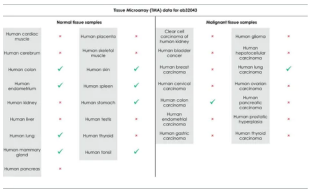
We do not recommend this combination. It is not covered by our product promise.

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.

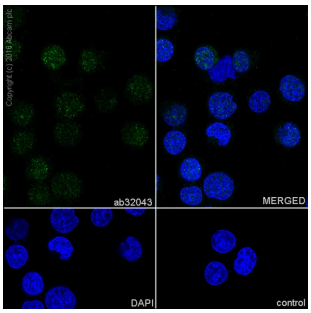
Full details and terms and conditions can be found here:
Terms & Conditions.

13 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT5a antibody [E289] (ab32043)

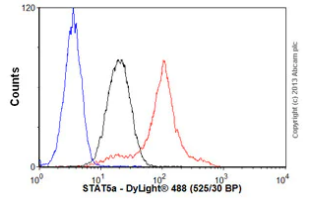
Tissue Microarrays stained for "Anti-STAT5a antibody [E289]" using "ab32043"in immunohistochemical analysis. This table provides a detailed overview of positive (tick mark) and negative (cross mark) staining per sample type tested. The sections were pre-treated using Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). The sections were incubated with ab32043 at +4°C overnight followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer).



Immunocytochemistry/ Immunofluorescence - Anti-STAT5a antibody [E289] (ab32043)

STAT5a Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-STAT5a antibody

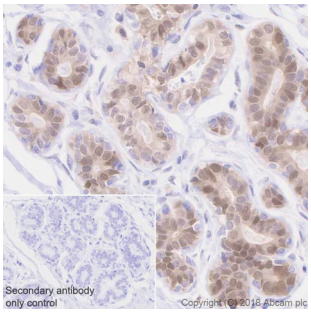
Immunocytochemistry/Immunofluorescence analysis of Jurkat cells labelling STAT5a with unpurified ab32043 at 1/500. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody.
Control: PBS only.
Nuclear counter stain: DAPI.



Flow Cytometry (Intracellular) - Anti-STAT5a antibody [E289] (ab32043)

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

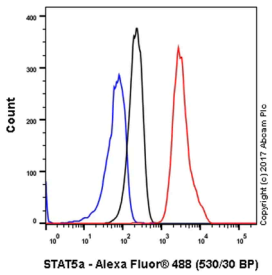
Overlay histogram showing Jurkat cells stained with unpurified ab32043 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab32043, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line). Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in Jurkat cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT5a antibody [E289] (ab32043)

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

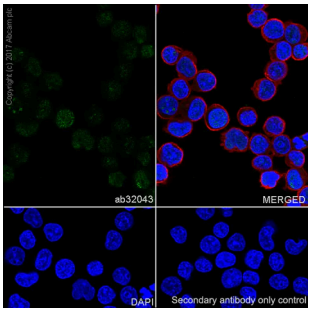
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast tissue sections labeling STAT5a with purified ab32043 at 1:1000 dilution (0.12 µg/ml). Heat mediated antigen retrieval was performed using Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use). PBS instead of the primary antibody was used as the negative control.



Flow Cytometry (Intracellular) - Anti-STAT5a antibody [E289] (ab32043)

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

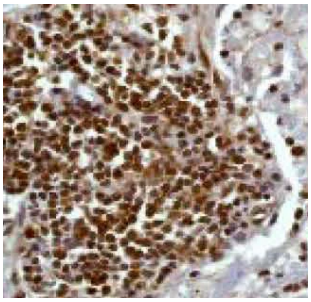
Intracellular Flow Cytometry analysis of Jurkat (human acute T cell leukemia) cells labeling STAT5a with purified ab32043 at 1/100 dilution (1 µg/ml) (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluorr® 488) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-STAT5a antibody [E289] (ab32043)

STAT5a Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-STAT5a antibody

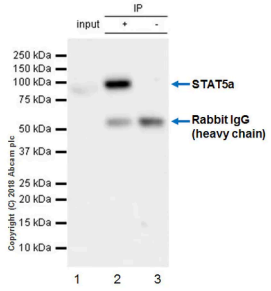
Immunocytochemistry/ Immunofluorescence analysis of Jurkat (human T cell leukemia T lymphocyte) cells labeling STAT5a with purified ab32043 at 1:100 (1.2 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT5a antibody [E289] (ab32043)

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

Unpurified ab32043 at 1/250 dilution, staining human squamous lung carcinoma by Immunohistochemistry, paraffin-embedded tissue. Heat mediated antigen retrieval was performed using Perform heat mediated antigen retrieval using (Tris/EDTA buffer, pH 9.0).

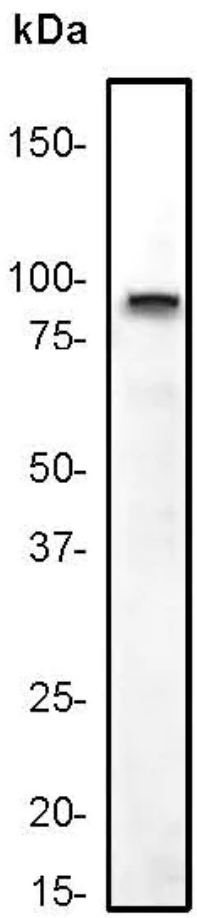


Immunoprecipitation - Anti-STAT5a antibody [E289] (ab32043)

ab32043 (purified) at 1:20 dilution (0.6ug) immunoprecipitating in TF-1 whole cell lysate. TF-1 (Human Erythroleukemia erythroblast) whole cell lysate 10ug
Lane 2 (+): ab32043 & TF-1 whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab32043 in TF-1 whole cell lysate
For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366) was used for detection at 1:1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-STAT5a antibody [E289] (ab32043)

Predicted band size: 90 kDa

Observed band size: 92 kDa



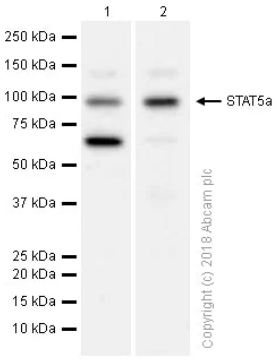
Western blot - Anti-STAT5a antibody [E289] (ab32043)

All lanes:
Western blot - Anti-STAT5a antibody [E289] (ab32043) at 1/1000 dilution

All lanes:
A431 cell lysate

Predicted band size: 90 kDa

Observed band size: 92 kDa



Western blot - Anti-STAT5a antibody [E289] (ab32043)

All lanes:
Western blot - Anti-STAT5a antibody [E289] (ab32043) at 1/1000 dilution

Lane 1:
Mouse brain lysates at 15 µg

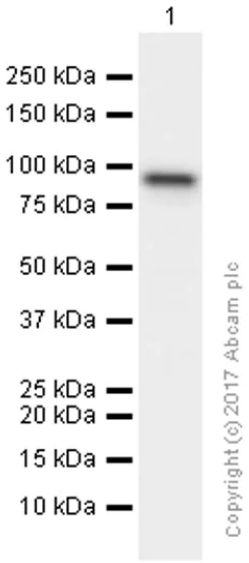
Lane 2:
Rat brain lysates at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 90 kDa

Observed band size: 92 kDa



Western blot - Anti-STAT5a antibody [E289] (ab32043)

All lanes:
Western blot - Anti-STAT5a antibody [E289] (ab32043) at 1/20000 dilution

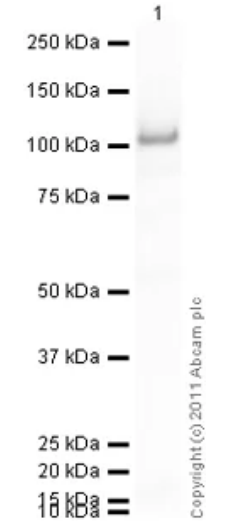
All lanes:
K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysates at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 90 kDa

Observed band size: 92 kDa



Western blot - Anti-STAT5a antibody [E289] (ab32043)

STAT5a Western blot staining using rabbit Anti-STAT5a antibody

All lanes:
Western blot - Anti-STAT5a antibody [E289] (ab32043) at 1/1000 dilution

All lanes:
Western blot - Recombinant Human STAT5a protein (His tag N-Terminus) (ab84627) 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: 90 kDa

Exposure time: 20s

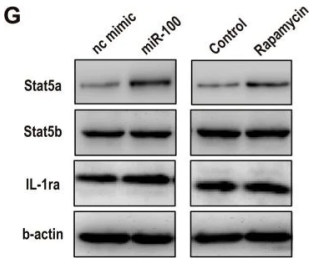


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Western blot - Anti-STAT5a antibody [E289] (ab32043)

STAT5a Western blot staining using rabbit Anti-STAT5a antibody

STAT5a western blot using anti-STAT5a antibody [E289] ab32043. Publication image and figure legend from Wang, W., Liu, Y., et al., 2018, Oncogenesis, PubMed 30563983.

ab32043 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab32043 please see the product overview.

miR-100 increases IL-1ra secretion through stat5a-mediated transcriptional regulation.a Supernatants of RAW264.7 cells transfected with miR-100 mimic and nc mimic were collected and secreted cytokines were measured by the mouse cytokine array panel. b IL-1ra mRNA expression was measured by qPCR in miR-100 mimic transfected RAW264.7 cells. c IL-1ra+ cells percentage in

PMs transfected with miR-100 mimic were measured by flow cytometry. d IL-1ra expression in miR-100 antagomir-treated 4T1 mouse breast cancer tissues was detected by ELISA. e, f qPCR and Western blot to detect IL-1ra expression in RAW264.7 cells transfected with siRNAs targeting several candidate TFs. g Western blot to detect Stat5a and Stat5b expression in RAW264.7 cells transfected with miR-100 mimic or treated with rapamycin. h Stat5a binding sites were predicted by ALLGEN database in IL-1ra promoter region from -3k to +1k. i Three stat5a binding sites were validated by qPCR in genomic DNA extracted from RAW264.7 cells. Data were shown as mean ± s.e.m. from three independent experiments; **$p < 0.01$, *$p < 0.05$

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