abcam

ab188080

Anti-STAT6 (phospho Y641) antibody [EPR18278-265]

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	EPR18278-265
Purification technique	Affinity purification Protein A
Concentration	0.392 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Dot

Tested

Species	Synthetic peptide
Dilution info	1/1000
Notes	-

Expected

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

WB

Tested

Species	Human
Dilution info	1/1000
Notes	p-STAT6 expression is typically undetectable or present at very low levels in healthy tissue lysates (e.g., kidney, lung, and skin) under physiological conditions (PMID: 34831280; PMID: 22401596; PMID: 24955743; PMID: 36629780). However, its expression is markedly upregulated in pathological states, including inflammatory responses and oncogenic activation (PMID: 36884218).

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/400
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Target data

See full target information STAT6 pY641

Function	Carries out a dual function: signal transduction and activation of transcription. Involved in IL4/interleukin-4- and IL3/interleukin-3-mediated signaling.

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	STAT6 also known as Signal Transducer and Activator of Transcription 6 is a transcription factor with a mass of around 94 kDa. This protein is an important component in the signaling pathways that respond to cytokines especially those of the IL-4 and IL-13 receptors. STAT6 mainly expresses in immune cells including T cells B cells and macrophages. It exists in the cytoplasm until the cytokine stimulation prompts its phosphorylation and translocation to the nucleus where it influences gene expression.
Biological function summary	STAT6 plays a central role in the development and function of Th2 cells a subset of T helper cells. The protein controls genes linked to the immune response and inflammation such as IL-4 and IL-13 by binding to specific DNA sequences as part of the transcriptional complex. These processes are critical for antibody class switching in B cells and also for regulating the differentiation of T cells which are

	processes important in defending against parasitic infections and are linked to allergies.
Pathways	STAT6 functions mainly in the JAK-STAT signaling pathway a pathway important for transmitting information from chemical signals outside cells to the cell nucleus resulting in DNA transcription. Within this pathway STAT6 works closely with JAK1 and JAK3 kinases which phosphorylate STAT6 enabling its activation. The protein also connects with other members of the STAT family like STAT1 and STAT3 during overlapping signaling processes.
Associated diseases and disorders	STAT6 has associations with asthma and certain types of cancer such as colorectal cancer. In asthma STAT6 influences the production of IgE and eosinophilic inflammation often connected to allergic responses. Meanwhile STAT6 promotes tumorigenesis in some cancers by regulating genes responsible for cell survival and proliferation. It connects with proteins like IL-4 and IL-13 in these disorders which suggests potential therapeutic targets for treatment.

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

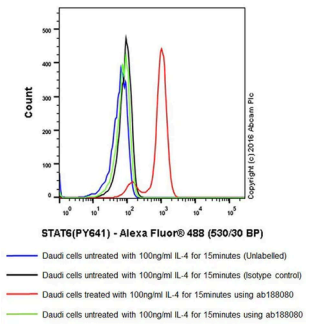
We do not recommend this combination. It is not covered by our product promise.

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.

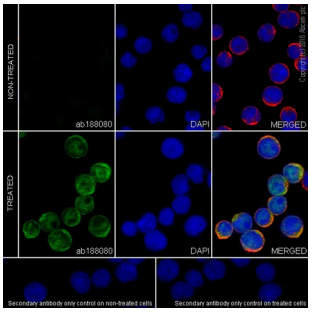
5 product images



Flow Cytometry (Intracellular) - Anti-STAT6 (phospho Y641) antibody [EPR18278-265] (ab188080)

STAT6 (phospho Y641) Flow Cytometry (Intracellular) staining using rabbit Anti-STAT6 (phospho Y641) antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed Daudi (Human Burkitt's lymphoma cell line) treated/untreated with 100 ng/ml IL-4 for 15 minutes cells labeling STAT6 (phospho Y641) with ab188080 at 1/400 dilution (treated, red; untreated, green) compared with a rabbit monoclonal IgG isotype control (ab172730; black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.



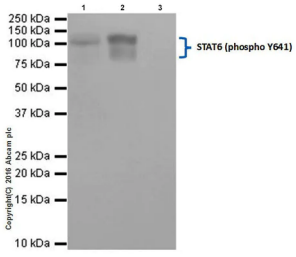
Immunocytochemistry/ Immunofluorescence - Anti-STAT6 (phospho Y641) antibody [EPR18278-265] (ab188080)

STAT6 (phospho Y641) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-STAT6 (phospho Y641) antibody

Immunofluorescent analysis of 100% methanol-fixed Daudi (Human Burkitt's lymphoma cell line) cells, treated with interleukin 4 (IL-4) (100 ng/ml) for 15minutes, or untreated, labeling STAT6 (phospho Y641) with ab188080 at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
The expression increased and there was nuclear translocation of STAT6 after treatment with interleukin 4 (IL-4) (100 ng/ml) for 15minutes (PMID:22226123).

The nuclear counterstain is DAPI (blue). Tubulin is detected with ab195889 (Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594)) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.



Immunoprecipitation - Anti-STAT6 (phospho Y641) antibody [EPR18278-265] (ab188080)

STAT6 (phospho Y641) was immunoprecipitated from 0.35 mg of Daudi (Human Burkitt's lymphoma cell line) whole cell lysate treated with 100 ng/ml IL-4 for 15 minutes with ab188080 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab188080 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.
Lane 1: Daudi whole cell lysate treated with 100 ng/ml IL-4 for 15 minutes, 10µg (Input). Lane 2: ab188080 IP in Daudi whole cell lysate treated with 100 ng/ml IL-4 for 15 minutes. Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab188080 in Daudi whole cell lysate treated with 100 ng/ml IL-4 for 15 minutes.

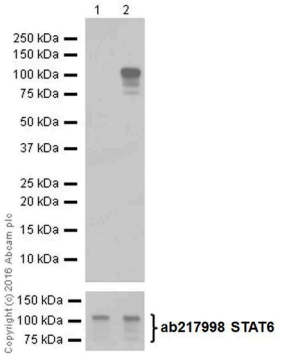
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 1 second.

This antibody recognizes three isoforms of STAT6, isoform 1 (110KD), isoform 2 (75KD), isoform 3 (81KD), which is consistent with the Uniprot annotation.

All lanes:
Immunoprecipitation - Anti-STAT6 (phospho Y641) antibody [EPR18278-265] (ab188080)

Predicted band size: 94 kDa



Western blot - Anti-STAT6 (phospho Y641) antibody [EPR18278-265] (ab188080)

Blocking/Dilution buffer: 5% NFDM/TBST.
Phosphorylation of STAT6 at Y641 can be induced by IL-4 treatment according to the literature (PMID: 21411736, PMID: 15044251, PMID: 14660485).

This antibody recognizes three isoforms of STAT6, isoform 1 (110KD), isoform 2 (75KD), isoform 3 (81KD), which is consistent with the Uniprot annotation.

All lanes:
Western blot - Anti-STAT6 (phospho Y641) antibody [EPR18278-265] (ab188080) at 1/1000 dilution

Lane 1:
Untreated Daudi (Human Burkitt's lymphoma cell line) whole cell lysate at 10 µg

Lane 2:
Daudi whole cell lysate treated with 100 ng/ml interleukin 4 (IL-4) for 15 minutes at 10 µg

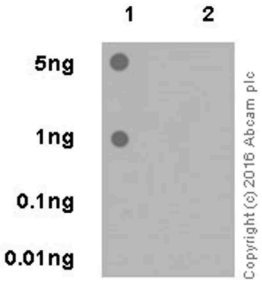
Secondary

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

Predicted band size: 94 kDa

Observed band size: 110 kDa

Exposure time: 5s



Dot Blot - Anti-STAT6 (phospho Y641) antibody [EPR18278-265] (ab188080)

Dot blot analysis of STAT6 (phospho Y641) labeled with ab188080 at 1/1000 dilution.
Lane 1: STAT6 (phospho Y641) phospho peptide.

Lane 2: STAT6 non-phospho peptide.

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/20000 dilution was used as secondary antibody.

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: 3 minutes.

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