abcam

ab197027

Anti-Sts1 antibody [EPR16980]

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	EPR16980
Purification technique	Affinity purification Protein A
Concentration	0.573 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/2000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/280
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Target data

See full target information UBASH3B

Function	Interferes with CBL-mediated down-regulation and degradation of receptor-type tyrosine kinases. Promotes accumulation of activated target receptors, such as T-cell receptors and EGFR, on the cell surface. Exhibits tyrosine phosphatase activity toward several substrates including EGFR, FAK, SYK, and ZAP70. Down-regulates proteins that are dually modified by both protein tyrosine phosphorylation and ubiquitination.

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	Sts1 also known as Suppressor of T-cell receptor signaling 1 is a protein with a mass of approximately 72 kDa. It functions mechanically by serving as a negative regulator in T-cell receptor signaling pathways. Sts1 contains N-terminal SH3 domains and C-terminal ubiquitin-associated domains essential for its regulatory activity. Expression of Sts1 is widespread with notable abundance in immune cells such as T-cells and B-cells. These structural features enable Sts1 to interact with various signaling molecules.
Biological function summary	In cellular processes Sts1 plays a role in modulating immune responses. It interacts with signaling proteins including the ZAP-70 kinase which is central to T-cell receptor signaling. Sts1 forms a complex with several proteins involved in the ubiquitination process which marks proteins for degradation or alters their function. By this Sts1 influences the strength and duration of signals received by the immune cells ensuring proper immune system function.
Pathways	Sts1 serves in the T-cell receptor signaling pathway and contributes to the modulation of the immune response. The protein is closely linked to ubiquitin-proteasome system pathways which govern protein turnover and cellular regulation. In these pathways Sts1 associates with proteins like c-Cbl which are involved in the ubiquitination and degradation of signaling intermediates.
Associated diseases and disorders	Deficiencies or dysregulation of Sts1 are often associated with autoimmune diseases and certain lymphomas. Its interplay with proteins like c-Cbl or ZAP-70 can result in aberrant T-cell activation and uncontrolled proliferation. This abnormal signaling could lead to autoimmune disorders such as systemic lupus erythematosus or contribute to the development of B-cell lymphomas where immune regulation breaks down.

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

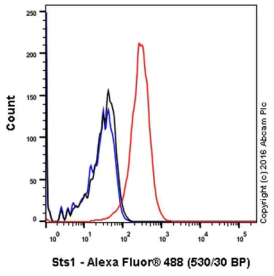
We do not recommend this combination. It is not covered by our product promise.

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.

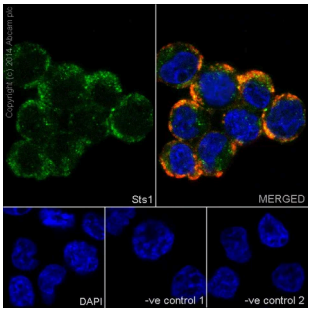
3 product images



Flow Cytometry (Intracellular) - Anti-Sts1 antibody [EPR16980] (ab197027)

Sts1 Flow Cytometry (Intracellular) staining using rabbit Anti-Sts1 antibody

Intracellular Flow Cytometry analysis of Jurkat (human acute T cell leukemia) labelling Sts1 with purified ab197027 at 1/50 (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Alexa Fluor® 488 goat anti-rabbit IgG (1/2000) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.

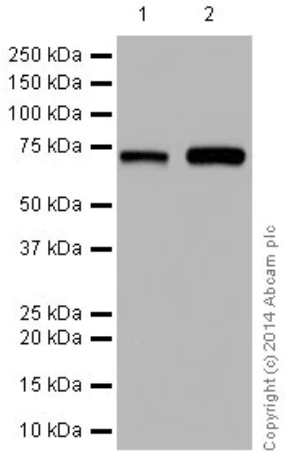


Immunocytochemistry/ Immunofluorescence - Anti-Sts1 antibody [EPR16980] (ab197027)

Sts1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Sts1 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized Jurkat (Human T cell leukemia cells from peripheral blood) cells labeling Sts1 with ab197027 at 1/280 dilution followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green). Cytoplasm and weakly nuclear staining on Jurkat 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: ab197027 at 1/280 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-Sts1 antibody [EPR16980] (ab197027)

Sts1 Western blot staining using rabbit Anti-Sts1 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Sts1 antibody [EPR16980] (ab197027) at 1/2000 dilution

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

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

Secondary

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

Predicted band size: 72 kDa

Observed band size: 73 kDa

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