abcam

ab181157

Anti-STAC antibody [EPR12805] - N-terminal

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	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	EPR12805
Purity	Tissue culture supernatant

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Mouse, Rat

Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/20
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information STAC

Function	Promotes expression of the ion channel CACNA1H at the cell membrane, and thereby contributes to the regulation of channel activity. Plays a minor and

redundant role in promoting the expression of calcium channel CACNA1S at the cell membrane, and thereby contributes to increased channel activity. Slows down the inactivation rate of the calcium channel CACNA1C.

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	STAC also known as SH3 and cysteine-rich domain 3 is a protein with a known molecular mass of approximately 38 kilodaltons. Structurally STAC contains a domain known as the SH3 domain which aids in protein-protein interactions. STAC expresses widely in various tissues including the brain heart and skeletal muscle. It interacts with other proteins through its cysteine-rich domain playing roles in cellular signaling.

Biological function summary	Proteins with SH3 domains like STAC contribute to intracellular signaling pathways. STAC interacts within complexes that modulate ion channel activities which is important for cellular excitability. It holds an essential role in synaptic transmission and muscle contraction functions. The presence of STAC in the membrane and cytosolic compartments suggests its involvement in dynamic cellular processes.
Pathways	STAC participates in both the calcium signaling pathway and the excitation-contraction coupling pathway. In calcium signaling it regulates calcium channels which are critical for maintaining cellular calcium homeostasis. Additionally STAC is involved with the excitation signal pathway by interacting with proteins such as RyR1 (Ryanodine Receptor 1) that facilitate calcium release in muscle contraction. This integration affects the overall physiological response during muscle excitation.
Associated diseases and disorders	STAC shows an association with cardiac arrhythmias and muscular dystrophy. Mutations or altered expression in STAC can impact calcium homeostasis and muscle function contributing to these conditions. Additionally STAC links to the CACNA1S protein in muscular disorders associated with calcium channel dysfunction which further highlights its role in the pathophysiology of these diseases.

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

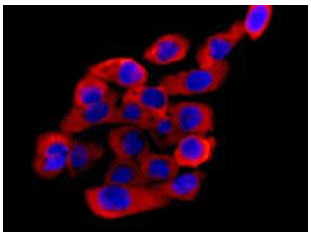
We do not recommend this combination. It is not covered by our product promise.

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.

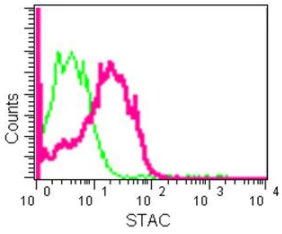
4 product images



Immunocytochemistry/ Immunofluorescence - Anti-STAC antibody [EPR12805] - N-terminal (ab181157)

STAC Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-STAC antibody

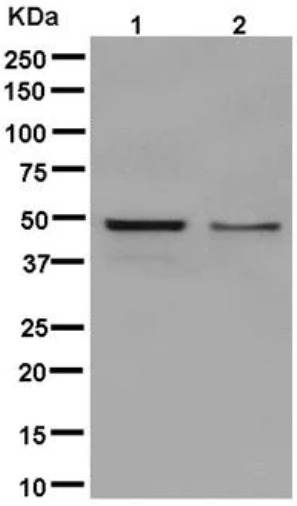
Immunofluorescence analysis of A431 cells (fixative 4% paraformaldehyde) labeling STAC with ab181157 at a 1/250 dilution. Goat anti rabbit IgG (Alexa Fluor® 555) secondary used at a 1/200 diution. Counter stained with Dapi (blue).



Flow Cytometry (Intracellular) - Anti-STAC antibody [EPR12805] - N-terminal (ab181157)

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

Intracellular Flow Cytometry analysis of A431 cells labeling STAC using ab181157at a 1/20 dilution (red) or aRabbit monoclonal IgG (negative) (green). Goat anti rabbit IgG (FITC) secondary usedat a 1/150 dilution.



Western blot - Anti-STAC antibody [EPR12805] - N-terminal (ab181157)

All lanes:
Western blot - Anti-STAC antibody [EPR12805] - N-terminal (ab181157) at 1/2000 dilution

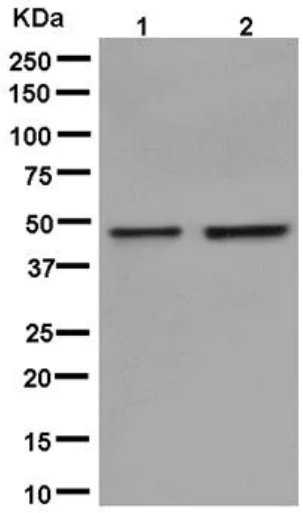
Lane 1:
Human fetal brain lysate at 20 µg

Lane 2:
A431 cell lysate at 20 µg

Secondary

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

Predicted band size: 45 kDa



Western blot - Anti-STAC antibody [EPR12805] - N-terminal (ab181157)

All lanes:
Western blot - Anti-STAC antibody [EPR12805] - N-terminal (ab181157) at 1/10000 dilution

Lane 1:
U87-MG lysate at 20 µg

Lane 2:
293 lysate at 20 µg

Secondary

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

Predicted band size: 45 kDa

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