abcam

ab192879

Anti-STRAD antibody [EPR15603]

Recombinant | RabMAb | KO Validated

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	EPR15603
Purification technique	Affinity purification Protein A
Specificity	Based on the sequence analysis, ab192879 recognizes six isoforms with the predicted MWs of 48KDa, 39KDa, 44KDa, 33KDa, 42KDa and 35KDa, respectively.
Concentration	2.196 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000

Notes	-

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/400
Notes	-

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	Purified format.

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Tested

Species	Rat
Dilution info	1/50 - 1/100
Notes	-

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information STRADA

Function	Pseudokinase which, in complex with CAB39/MO25 (CAB39/MO25alpha or CAB39L/MO25beta), binds to and activates STK11/LKB1. Adopts a closed conformation typical of active protein kinases and binds STK11/LKB1 as a pseudosubstrate, promoting conformational change of STK11/LKB1 in an active conformation.

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	The STE20-related adaptor (STRAD) is a pseudokinase that functions in cellular processes by regulating the LKB1 kinase activity. Also known as STRADA its molecular mass varies but it typically weighs around 50 kDa. STRAD is expressed in various tissues including the brain liver and muscle. This wide expression suggests it plays multiple roles in cellular function.
Biological function summary	STRAD interacts with the serine/threonine-protein kinase LKB1 to promote its catalytic activity. It forms a complex with LKB1 and MO25 which stabilizes LKB1 in an active conformation. This complex plays an important role in regulating cellular energy balance and cell polarity. STRAD's interaction is essential for localizing LKB1 to the cytoplasm where LKB1 exerts its function.
Pathways	STRAD plays a significant role in the AMP-activated protein kinase (AMPK) pathway which is important for maintaining energy homeostasis. It helps activate AMPK through its relationship with LKB1. STRAD is also involved in the PI3K/AKT pathway which affects cell growth and survival demonstrating its impact on critical signaling processes. The interplay of STRAD with these pathways involves interactions with related proteins such as AMPK subunits and AKT.
Associated diseases and disorders	Malfunction or mutation of the STRAD protein has been implicated in Peutz-Jeghers syndrome a disorder characterized by gastrointestinal polyps and an increased cancer risk. This association is largely due to its interaction with LKB1 mutations of which are known to drive the disease. STRAD alterations have also been associated with certain forms of epilepsy given its role in neuron function and brain expression. The involvement in these health conditions underlines the importance of STRAD in human health.

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

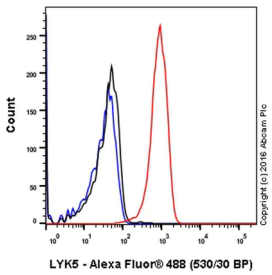
We do not recommend this combination. It is not covered by our product promise.

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.

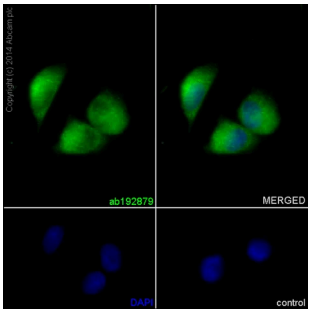
6 product images



Flow Cytometry (Intracellular) - Anti-STRAD antibody [EPR15603] (ab192879)

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

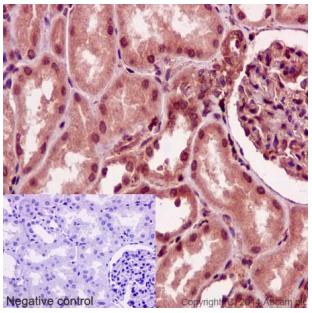
Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labelling STRAD antibody (red) with purified ab192879 at a dilution of 1/200. Goat anti rabbit IgG (Alexa Fluor® 488) was used as the secondary antibody at 1/2000. Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Isotype control antibody was Rabbit monoclonal IgG (black). The blue line shows cells without incubation with primary antibody and secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-STRAD antibody [EPR15603] (ab192879)

STRAD Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-STRAD antibody

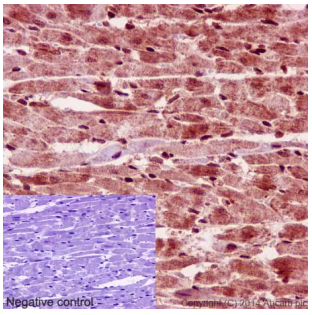
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% triton X-100 permeabilized A549 cells labeling STRAD with ab192879 at a 1/400 dilution, followed by Goat anti rabbit IgG(Alexa Fluor® 488) secondary antibody (ab150077) at 1/400 dilution. Nuclear counter stain: Dapi (blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STRAD antibody [EPR15603] (ab192879)

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

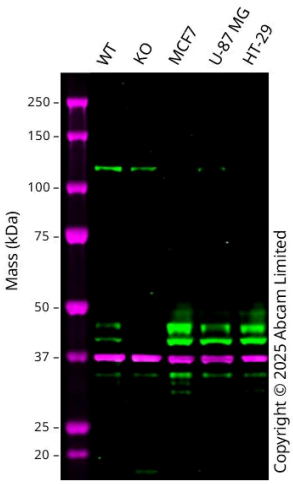
Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling STRAD with ab192879 at a 1/100 dilution, followed by prediluted HRP Polymer for Rabbit/Mouse IgG as a secondary antibody. Counter stained with Hematoxylin. Negative control also shown.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STRAD antibody [EPR15603] (ab192879)

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

Immunohistochemical analysis of paraffin-embedded rat cardiac muscle tissue labeling STRAD with ab192879 at a 1/100 dilution, followed by prediluted HRP Polymer for Rabbit/Mouse IgG as a secondary antibody. Counter stained with Hematoxylin. Negative control also shown.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-STRAD antibody [EPR15603] (ab192879)

STRAD Western blot staining using rabbit Anti-STRAD antibody

Western blot: Anti-STRAD antibody [EPR15603] ab192879 staining at 1/5000 dilution, shown in green; Mouse anti GAPDH (ab8245) loading control staining at 1/20,000 dilution, shown in magenta. A band was observed at 48 kDa in Wild-type A549 cell lysates with no signal observed at this size in STRADA knockout A549 cell line.

To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3pc Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20,000 dilution.
Lanes 1 - 5:
Western blot - Anti-STRAD antibody [EPR15603] (ab192879) at 1/5000 dilution

Lanes 1 - 5:
Western blot - Anti-STRAD antibody [EPR15603] - BSA and Azide free (ab232340) at 1/5000 dilution

Lane 1:
Wild-type A549 at 20 µg

Lane 2:
STRADA knockout A549 at 20 µg

Lane 3:
MCF7 at 20 µg

Lane 4:
U-87 MG at 20 µg

Lane 5:
HT-29 at 20 µg

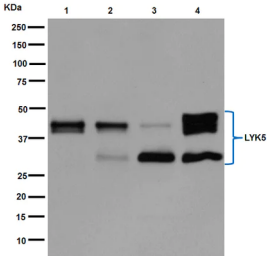
Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 48 kDa

Observed band size: 48 kDa



Western blot - Anti-STRAD antibody [EPR15603] (ab192879)

All lanes:
Western blot - Anti-STRAD antibody [EPR15603] (ab192879) at 1/5000 dilution

Lane 1:
293 cell lysate at 20 µg

Lane 2:
HepG2 cell lysate at 20 µg

Lane 3:
HepG2 cell lysate at 20 µg

Lane 4:
Human fetal brain lysate at 20 µg

Secondary

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

Predicted band size: 48 kDa

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