abcam

ab188873

Anti-Syntrophin alpha 1 antibody [EPR14828]

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	EPR14828
Purification technique	Affinity purification Protein A
Concentration	1.486 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

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

Species	Human

Dilution info	1/1000 - 1/10000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/280
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

IHC-P

Tested

Species	Human

Dilution info	1/250 - 1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Expected

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

Target data

See full target information SNTA1

Function	Adapter protein that binds to and probably organizes the subcellular localization of a variety of membrane proteins. May link various receptors to the actin cytoskeleton and the extracellular matrix via the dystrophin glycoprotein complex. Plays an important role in synapse formation and in the organization of UTRN and acetylcholine receptors at the neuromuscular synapse. Binds to phosphatidylinositol 4,5-bisphosphate (By similarity).

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	Syntrophin alpha 1 also known as SNTA1 or by its protein mass of about 53 kDa is an adaptor protein that plays an important role in linking the cytoskeleton to the cell membrane. It interacts with ion channels receptors and signaling proteins at the membrane. Syntrophin alpha 1 forms part of the dystrophin-associated protein complex important for structural integrity and signaling processes in muscle tissue. This protein sees expression mainly in skeletal and cardiac muscles as well as in the brain where it contributes to signal transduction and cellular architecture.
Biological function summary	Syntrophin alpha 1 contributes to maintaining muscular and neural function by organizing protein complexes at the cell membrane. It anchors various signaling molecules and is part of the dystrophin-glycoprotein complex. This involvement helps stabilize the muscle cell membrane during contraction and impact preventing damage. In neurons it modulates synaptic signaling and assists in maintaining cellular organization. The precise coordination of this protein with others in its complex ensures proper physiological responses to environmental stimuli.
Pathways	Syntrophin alpha 1 is a component of signaling pathways related to muscle contraction and neurological processes. It interfaces with the PI3K/AKT signaling pathway connected to cellular growth and the nitric oxide pathway that regulates muscle blood flow. Syntrophin alpha 1 is closely related to dystrophin in these pathways and together they interface with neuronal nitric oxide synthase (nNOS) modulating blood flow and synaptic activity. This partnership not only regulates physiological functions but also maintains cellular stability during stress.
Associated diseases and disorders	Alterations in syntrophin alpha 1 are associated with muscular dystrophies and cardiac conditions. Its malfunction contributes to disorders such as Duchenne muscular dystrophy where the absence of dystrophin disrupts the syntrophin-mediated membrane stability. Furthermore SNTA1 mutations can lead to long QT syndrome affecting cardiac electrical activity. In both cases the disturbance in syntrophin's interaction with dystrophin and nNOS contributes to disease progression leading to impaired muscle or cardiac function.

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

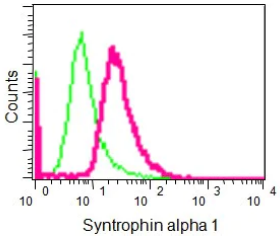
We do not recommend this combination. It is not covered by our product promise.

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.

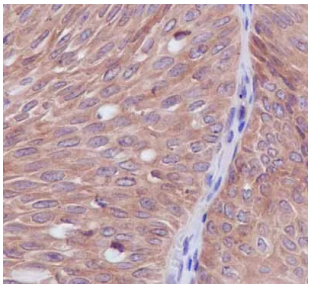
7 product images



Flow Cytometry (Intracellular) - Anti-Syntrophin alpha 1 antibody [EPR14828] (ab188873)

Syntrophin alpha 1 Flow Cytometry (Intracellular) staining using rabbit Anti-Syntrophin alpha 1 antibody

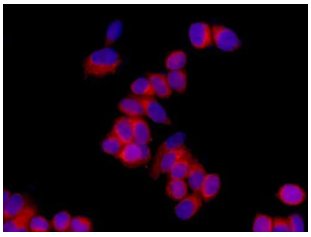
Intracellular flow cytometric analysis of 2% paraformaldehyde-fixedHT29 cells labeling Syntrophin alpha 1with ab188873 at 1/280 dilution (red)compared to a Rabbit monoclonal IgG isotype control (green), followed by Goat anti rabbit IgG (FITC) secondary at 1/150 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Syntrophin alpha 1 antibody [EPR14828] (ab188873)

Syntrophin alpha 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Syntrophin alpha 1 antibody

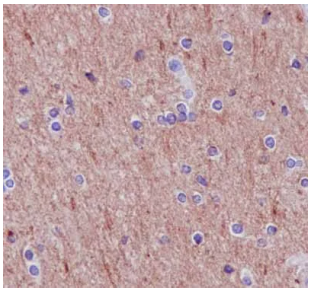
Immunohistochemical analysis of paraffin-embedded Human bladder transitional cell carcinoma tissue labeling Syntrophin alpha 1 with ab188873 at 1/500 dilution followed by prediluted HRP Polymer for Rabbit IgG. Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Syntrophin alpha 1 antibody [EPR14828] (ab188873)

Syntrophin alpha 1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Syntrophin alpha 1 antibody

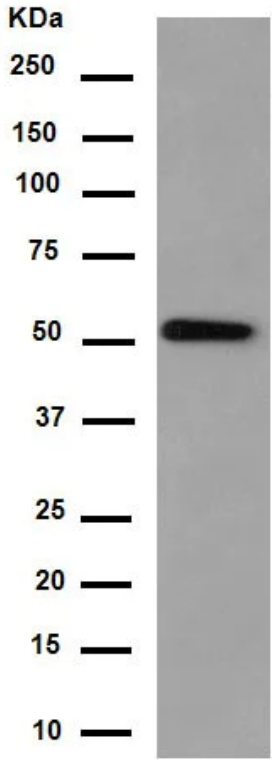
Immunofluorescent analysis of 4% paraformaldehyde-fixed MCF7 cells labeling Syntrophin alpha 1 with ab188873 at 1/250 dilution followed by Goat anti rabbit IgG (AlexaFluor® 555) secondary antibody at 1/200 dilution. Counter stained with DAPI (blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Syntrophin alpha 1 antibody [EPR14828] (ab188873)

Syntrophin alpha 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Syntrophin alpha 1 antibody

Immunohistochemical analysis of paraffin-embedded Human brain tissue labeling Syntrophin alpha 1 with ab188873 at 1/500 dilution followed by prediluted HRP Polymer for Rabbit IgG. Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-Syntrophin alpha 1 antibody [EPR14828] (ab188873)

All lanes:
Western blot - Anti-Syntrophin alpha 1 antibody [EPR14828] (ab188873) at 1/1000 dilution

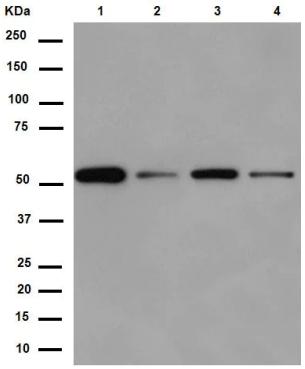
All lanes:
Human muscle lysate at 10 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 54 kDa

Observed band size: 54 kDa



Western blot - Anti-Syntrophin alpha 1 antibody [EPR14828] (ab188873)

All lanes:
Western blot - Anti-Syntrophin alpha 1 antibody [EPR14828] (ab188873) at 1/1000 dilution

Lane 1:
HT29 lysate at 20 µg

Lane 2:
HepG2 lysate at 20 µg

Lane 3:
A549 lysate at 20 µg

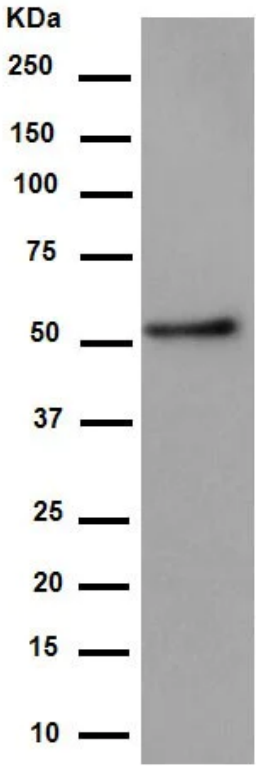
Lane 4:
MCF7 lysate at 20 µg

Secondary

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

Predicted band size: 54 kDa

Observed band size: 54 kDa



Western blot - Anti-Syntrophin alpha 1 antibody [EPR14828] (ab188873)

All lanes:
Western blot - Anti-Syntrophin alpha 1 antibody [EPR14828] (ab188873) at 1/1000 dilution

All lanes:
NIH 3T3 lysate at 10 µg

Secondary

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

Predicted band size: 54 kDa

Observed band size: 54 kDa

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