abcam

ab40758

Anti-alpha Internexin antibody [EP676Y]

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	EP676Y
Purification technique	Affinity purification Protein A
Concentration	0.089 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/5000 - 1/10000
Notes	-

Expected

Species	Rat
Dilution info	-
Notes	-

Species	Mouse
Dilution info	1/5000 - 1/10000
Notes	-

Not recommended

Species	Apteronotus leptorhynchus
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Expected

Species	Rat
Dilution info	-
Notes	-

Species	Mouse
Dilution info	1/250 - 1/500
Notes	-

Not recommended

Species	Apteronotus leptorhynchus

Dilution info	-
Notes	-

ICC/IF

Tested

Species	Rat
Dilution info	1/250 - 1/500
Notes	-

Expected

Species	Human
Dilution info	-
Notes	-

Species	Mouse
Dilution info	1/250 - 1/500
Notes	-

Not recommended

Species	Apteronotus leptorhynchus
Dilution info	-
Notes	-

IP

Expected

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

Not recommended

Species	Apteronotus leptorhynchus
Dilution info	-
Notes	-

Flow Cyt

Expected

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

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

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

Not recommended

Species	Apteronotus leptorhynchus
Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

IHC-FoFr

Expected

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

Not recommended

Species	Apteronotus leptorhynchus
Dilution info	-
Notes	-

Target data

See full target information INA

Function	Class-IV neuronal intermediate filament that is able to self-assemble. It is involved in the morphogenesis of neurons. It may form an independent structural network without the involvement of other neurofilaments or it may cooperate with NEFL to form the filamentous backbone to which NEFM and NEFH attach to form the cross-bridges. May also cooperate with the neuronal intermediate filament protein PRPH to form filamentous networks (By similarity).

Storage

Shipped at conditions	Conditional Ambient
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	Alpha Internexin also known as alpha-Int or INA is a neuronal intermediate filament protein with a molecular mass of approximately 66 kDa. It plays a significant role in the formation of the neuronal cytoskeleton providing structural support to axons. Alpha Internexin is expressed mainly in the central nervous system and is found in neurons throughout the brain and spinal cord. Despite sharing functions with other intermediate filament proteins like NF-L alpha Internexin is unique in its distribution and timing of expression during neural development.
Biological function summary	Alpha Internexin contributes to the composition of the neurofilament complex which includes proteins like NF-M NF-L and NF-H. This complex stabilizes neuronal architecture and ensures the integrity of the axonal structure. Presence of alpha Internexin is important for maintaining the dynamic processes of axonal transport and neuron stability. It acts as a scaffolding that supports cellular transport mechanisms important for neuron function and survival especially in developing neurons where it leads the polymerization of other neurofilaments.
Pathways	Alpha Internexin interacts within the neurofilament network a major scaffolding component of neurons. It associates with microtubule-associated proteins influencing axonal growth and stabilization pathways. Moreover it plays a part in the MAPK (mitogen-activated protein kinases) signaling pathways which regulate diverse cellular activities such as proliferation and differentiation. Its interactions with related proteins such as plectin and dynein highlight its role in crosslinking cytoskeletal components and facilitating intracellular transport.
Associated diseases and disorders	Alpha Internexin has been implicated in neurodegenerative conditions such as Amyotrophic Lateral Sclerosis (ALS) and Alzheimer's disease. Misregulation or mutation in alpha Internexin can contribute to the pathological hallmarks of these diseases including protein aggregation and neuronal death. In ALS the presence of alpha Internexin inclusions correlates with disease pathology alongside other neurofilament proteins like NF-L. In Alzheimer's disease abnormal phosphorylation and aggregation of alpha Internexin are associated with neurofibrillary tangles which are indicative of neuronal injury and loss.

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.

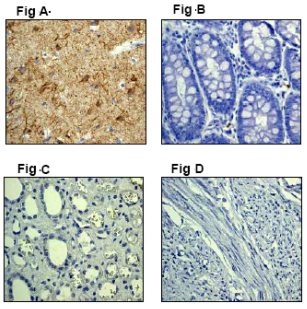
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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5 product images

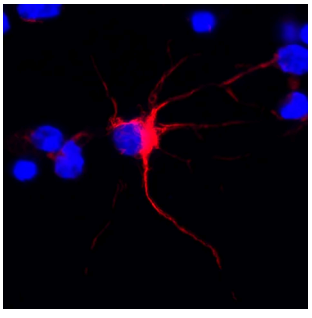


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha Internexin antibody [EP676Y] (ab40758)

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

Positive staining of alpha Internexin on paraffin-embedded human brain tissue (A) using ab40758 diluted 1:250. Negative staining of paraffin-embedded human colon (B), Kidney (C) and uterus (D) tissues using ab40758 under the same conditions.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

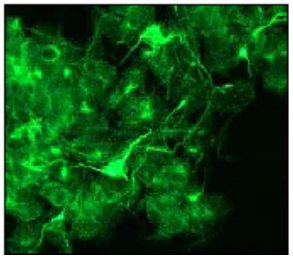


This image is courtesy of an anonymous customer review

Immunocytochemistry/ Immunofluorescence - Anti-alpha Internexin antibody [EP676Y] (ab40758)

Alpha Internexin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-alpha Internexin antibody

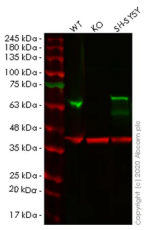
ab40758 staining alpha Internexin in rat glial cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with saponin and blocked with 1% BSA for 10 minutes at 25°C. Samples were incubated with primary antibody (1/200) for 10 hours at 4°C. An undiluted Alexa Fluor® 594-conjugated donkey anti-rabbit IgG polyclonal was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-alpha Internexin antibody [EP676Y] (ab40758)

Alpha Internexin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-alpha Internexin antibody

Immunofluorescent staining of alpha Internexin on PC 12 cells using ab40758 diluted 1:250.



Western blot - Anti-alpha Internexin antibody [EP676Y] (ab40758)

Alpha Internexin Western blot staining using rabbit Anti-alpha Internexin antibody

Lanes 1-4: Merged signal (red and green). Green - ab40758 observed at 66 kDa. Red - loading control ab8245 observed at 36 kDa.
ab40758 Anti-alpha Internexin antibody [EP676Y] was shown to specifically react with alpha Internexin in wild-type HeLa cells. Loss of signal was observed when knockout cell line ab265264 (knockout cell lysate ab257482) was used. Wild-type and alpha Internexin knockout samples were subjected to SDS-PAGE. ab40758 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-alpha Internexin antibody [EP676Y] (ab40758) at 1/1000 dilution

Lane 1:
Wild-type HeLa cell lysate at 20 µg

Lane 2:
Western blot - Human INA (alpha Internexin) knockout HeLa cell lysate (ab257482) at 20 µg

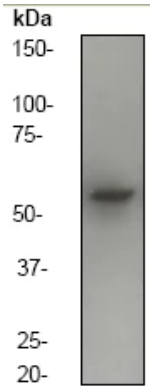
Lane 3:
SH-SY5Y cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/10000 dilution

Predicted band size: 52 kDa, 55 kDa

Observed band size: 60 kDa, 66 kDa



Western blot - Anti-alpha Internexin antibody [EP676Y] (ab40758)

All lanes:
Western blot - Anti-alpha Internexin antibody [EP676Y] (ab40758) at 1/10000 dilution

All lanes:
SHSY5Y cell lysate at 10 µg

Predicted band size: 55 kDa

Observed band size: 60 kDa

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