abcam

ab7654

Anti-alpha Internexin antibody [2E3]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.03% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine)
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Rat Ina. Database link P23565
Clone number	2E3
Purity	Tissue culture supernatant
Specificity	specifically recognizes a-internexin.
Epitope	C-terminal non-helical extension of the protein.
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/100

Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

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

Predicted

Species	Mouse, Cow, Mammals
Dilution info	-
Notes	-

WB

Tested

Species	Rat
Dilution info	1/100
Notes	-

Expected

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

Predicted

Species	Mouse, Cow, Mammals
Dilution info	-
Notes	-

ICC/IF

Expected

Species	Mouse
Dilution info	1/500
Notes	-

Species	Rat
Dilution info	1/500
Notes	-

Species	Human
Dilution info	1/500
Notes	-

Species	Cow
Dilution info	1/500
Notes	-

Predicted

Species	Mammals
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 Blue Ice

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

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

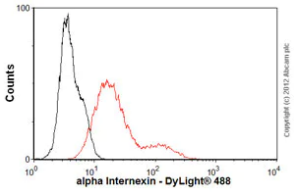
We do not recommend this combination. It is not covered by our product promise.

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.

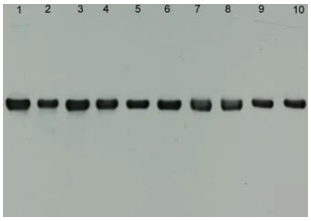
3 product images



Flow Cytometry - Anti-alpha Internexin antibody [2E3] (ab7654)

Alpha Internexin Flow Cytometry staining using mouse Anti-alpha Internexin antibody

Overlay histogram showing SH-SY5Y cells stained with ab7654 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab7654, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in SH-SY5Y cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Western blot - Anti-alpha Internexin antibody [2E3] (ab7654)

All lanes:
Western blot - Anti-alpha Internexin antibody [2E3] (ab7654)

Lanes 1 - 2:
Crude homogenate of rat facial nucleus at 3 days after experimental injury

Lanes 3 - 4:
Crude homogenate of rat facial nucleus at 5 days after experimental injury

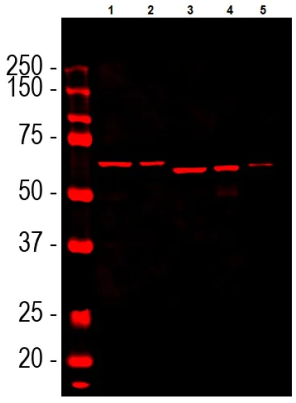
Lanes 5 - 6:
Crude homogenate of rat facial nucleus at 7 days after experimental injury

Lanes 7 - 8:
Crude homogenate of rat facial nucleus at 14 days after experimental injury

Lanes 9 - 10:
Crude homogenate of rat facial nucleus at 28 days after experimental injury

Predicted band size: 55 kDa

Observed band size: 66 kDa



Western blot - Anti-alpha Internexin antibody [2E3] (ab7654)

All lanes:
Western blot - Anti-alpha Internexin antibody [2E3] (ab7654) at 1/10000 dilution

Lane 1:
Rat brain lysate

Lane 2:
Rat spinal cord lysate

Lane 3:
Mouse brain lysate

Lane 4:
Mouse spinal cord lysate

Lane 5:
Cow spinal cord lysate

Predicted band size: 55 kDa

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