

Alpha-Internexin (NF66) Antibody

Chicken polyclonal antibody Catalog # AN1138

Specification

Alpha-Internexin (NF66) Antibody - Product Information

Application WB, IF Primary Accession P23565

Reactivity Human, Mouse, Rat

Host chicken
Clonality polyclonal
Calculated MW 66 KDa

Alpha-Internexin (NF66) Antibody - Additional Information

Gene ID 24503 Gene Name INA

Other Names

Alpha-internexin, Alpha-Inx, Ina, Inexa

Target/Specificity

Recombinant rat alpha-internexin expressed in and purified from E. coli.

Dilution

WB~~ 1:5000 IF~~ 1:500

Format

Total IgY fraction

Antibody Specificity

Specific for the \sim 66k alpha Internexin protein. Minor bands at \sim 150k are probably covalent dimers and bands at \sim 50k represent alpha-internexin breakdown products.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Alpha-Internexin (NF66) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

Blue Ice

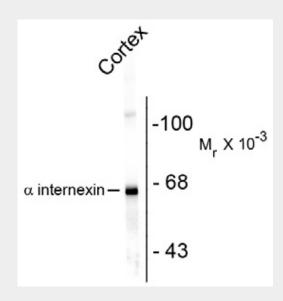
Alpha-Internexin (NF66) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

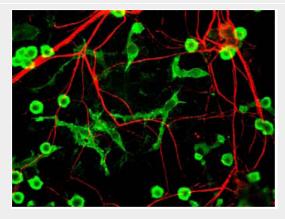


- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

Alpha-Internexin (NF66) Antibody - Images



Western blot of rat cortex lysate showing specific immunolabeling of the \sim 66k alpha internexin protein.



Immunostaining of cultured neurons and glia showing specific labeling of neuronal processes (red) using our alpha-internexin antibody and microglia (green) with a coronin 1a antibody.

Alpha-Internexin (NF66) Antibody - Background

Alpha-internexin is a Class IV intermediate filament originally discovered as it co-purifies with other neurofilament subunits (1). Alpha-internexin is related to but distinct from the better known neurofilament triplet proteins, NF-L, NF-M and NF-H, having similar protein sequence motifs and a similar intron organization. It is expressed only in neurons and in large amounts early in neuronal development, but is down-regulated in many neurons as development proceeds. Many classes of mature neurons contain alpha-internexin in addition to NF-L, NF-M and NF-H. In some mature neurons alpha-internexin is the only neurofilament subunit expressed. Antibodies to



Tel: 858.875.1900 Fax: 858.875.1999

alpha-internexin are therefore unique probes to study and classify neuronal types and follow their processes in sections and in tissue culture. In addition, recent studies show a marked up-regulation of alpha-internexin during neuronal regeneration (2). The use of antibodies to this protein in the study of brain tumors has not been examined to date, but is likely to be of interest. Recently Cairns et al. used this antibody to show that alpha-internexin is an abundant component of the inclusions of neurofilament inclusion body disease (NFID), a serious human neurodegenerative disorder (3,4). The antibody was also used to confirm the presence of circulating auto-antibodies to alpha-internexin in the sera of some patients with endocrine autoimmunity, as well as in some normal individuals (5).

Alpha-Internexin (NF66) Antibody - References

- 1. Pachter, J and Liem, RKH. Alpha-Internexin, a 66-kD intermediate filament-binding protein from mammalian central nervous tissues. J Cell Biol 101:1316-22 (1985).
- 2. McGraw et al. Axonally transported peripheral signals regulate alpha-internexin expression in regenerating motoneurons. J Neurosci 22:4955-63 (2002).
- 3. Cairns NJ et al. alpha-Internexin aggregates are abundant in neuronal intermediate filament inclusion disease (NIFID) but rare in other neurodegenerative diseases. Acta Neuropathol (Berl). May 28 [Epub ahead of print] (2004).
- 4. Cairns NJ et al. alpha-internexin is present in the pathological inclusions of neuronal intermediate filament inclusion disease. Am J Pathol. 164:2153-61 (2004).
- 5. Rajasalu T, Teesalu K, Janmey PA, Uibo R. Demonstration of natural autoantibodies against the neurofilament protein alpha-internexin in sera of patients with endocrine autoimmunity and healthy individuals. Immunol Lett. 94:153-60 (2004).