

## $\alpha$ -Internexin

Cat.No. 167 002; Polyclonal rabbit antibody, 200  $\mu$ l antiserum (lyophilized)

### Data Sheet

Reconstitution/ Storage	200 $\mu$ l antiserum, lyophilized. For reconstitution add 200 $\mu$ l H <sub>2</sub> O, then aliquot and store at -20°C until use.
Applications	<b>WB:</b> 1 : 1000 up to 1 : 5000 (AP staining) <b>IP:</b> not tested yet <b>ICC:</b> 1 : 500 <b>IHC:</b> not tested yet <b>IHC-P/FFPE:</b> not tested yet
Immunogen	Recombinant protein corresponding to AA 1 to 499 from human $\alpha$ -Internexin (UniProt Id: Q16352)
Reactivity	Reacts with: rat (P23565), mouse (P46660). Other species not tested yet.
Specificity	Specific for $\alpha$ -internexin.
matching control	167-0P
Remarks	Ice cold methanol fixation is recommended.

### TO BE USED IN VITRO / FOR RESEARCH ONLY NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

The cytoskeleton of most eukaryotic cells is composed of three distinct components: Actin-based microfilaments, tubulin based microtubules and intermediate filaments (IFs).

$\alpha$ -Internexin is a neuronal intermediate filament of type four. It is assumed to be expressed by all neurons and precedes the onset of the expression of the heavy medium and light variants of neurofilaments which are major components of the neuronal IFs.

Alterations in the phosphorylation state of IFs have been associated with neurodegenerative diseases like Alzheimer, Parkinson, dementia with Lewy bodies (DLB), and motor neuron disease (MND).

### Selected General References

Alpha-internexin is structurally and functionally associated with the neurofilament triplet proteins in the mature CNS.  
Yuan A, Rao MV, Sasaki T, Chen Y, Kumar A, Veeranna, Liem RK, Eyer J, Peterson AC, Julien JP, Nixon RA, et al.  
The Journal of neuroscience : the official journal of the Society for Neuroscience (2006) 26(39): 10006-19.

Topography of alpha-internexin-positive neuronal aggregates in 10 patients with neuronal intermediate filament inclusion disease.

Armstrong RA, Cairns NJ  
European journal of neurology (2006) 13(5): 528-32.

The expression of alpha-internexin and peripherin in the developing mouse pineal gland.  
Ko TL, Chien CL, Lu KS  
Journal of biomedical science (2005) 12(5): 777-89.

Overexpression of neuronal intermediate filament protein alpha-internexin in PC12 cells.  
Chien CL, Liu TC, Ho CL, Lu KS  
Journal of neuroscience research (2005) 80(5): 693-706.

No requirement of alpha-internexin for nervous system development and for radial growth of axons.  
Levavasseur F, Zhu Q, Julien JP  
Brain research. Molecular brain research (1999) 69(1): 104-12.

Overexpression of alpha-internexin causes abnormal neurofilamentous accumulations and motor coordination deficits in transgenic mice.  
Ching GY, Chien CL, Flores R, Liem RK  
The Journal of neuroscience : the official journal of the Society for Neuroscience (1999) 19(8): 2974-86.

The pathway of assembly of intermediate filaments from recombinant alpha-internexin.  
Abumuhor IA, Spencer PH, Cohlberg JA  
Journal of structural biology (1998) 123(3): 187-98.

Excitable membranes and synaptic transmission: postsynaptic mechanisms. Localization of alpha-internexin in the postsynaptic density of the rat brain.  
Suzuki T, Mitake S, Okumura-Noji K, Shimizu H, Tada T, Fujii T  
Brain research (1997) 765(1): 74-80.

Compartmentation of alpha-internexin and neurofilament triplet proteins in cultured hippocampal neurons.  
Benson DL, Mandell JW, Shaw G, Banker G  
Journal of neurocytology (1996) 25(3): 181-96.

Phosphorylation of a 62 kd porcine alpha-internexin, a newly identified intermediate filament protein.  
Tanaka J, Ogawara M, Ando S, Shibata M, Yatani R, Kusagawa M, Inagaki M  
Biochemical and biophysical research communications (1993) 196(1): 115-23.

Alpha-internexin, a novel neuronal intermediate filament protein, precedes the low molecular weight neurofilament protein (NF-L) in the developing rat brain.  
Kaplan MP, Chin SS, Fliegner KH, Liem RK  
The Journal of neuroscience : the official journal of the Society for Neuroscience (1990) 10(8): 2735-48.

alpha-Internexin, a 66-kD intermediate filament-binding protein from mammalian central nervous tissues.  
Pachter JS, Liem RK  
The Journal of cell biology (1985) 101(4): 1316-22.