SANTA CRUZ BIOTECHNOLOGY, INC.

# α-internexin (2E3): sc-58478

## BACKGROUND

α-internexin is a brain specific type IV intermediate filament protein. This axonal protein is found in most, if not all, neurons of the CNS. The head domain of α-internexin is essential for self-assembly into a filament network. Expression levels of α-internexin have been shown to be maximal during late embryogenesis and to decline into adulthood, suggesting that this protein plays a role in regulatory processes during the development of the brain. The α-internexin promoter has been shown to be activated by Brn-3a or Brn-3c transcription factor binding, while Brn-3b binding to the promoter results in α-internexin repression.

## REFERENCES


1. Fliegner, K.H., et al. 1990. The predicted amino acid sequence of α-internexin is that of a novel neuronal intermediate filament protein. EMBO J. 9: 749-755.
2. Fliegner, K.H., et al. 1994. Expression of the gene for the neuronal intermediate filament protein α-internexin coincides with the onset of neuronal differentiation in the developing rat nervous system. J. Comp. Neurol. 342: 161-173.
3. Budhram-Mahadeo, V., et al. 1995. Activation of the α-internexin promoter by the Brn-3a transcription factor is dependent on the N-terminal region of the protein. J. Biol. Chem. 270: 2853-2858.
4. Suzuki, T., et al. 1997. Excitable membranes and synaptic transmission: postsynaptic mechanisms. Localization of α-internexin in the postsynaptic density of the rat brain. Brain Res. 765: 74-80.
5. Ching, G.Y., et al. 1998. Roles of head and tail domains in α-internexin's self-assembly and coassembly with the neurofilament triplet proteins. J. Cell Sci. 111: 321-333.


## CHROMOSOMAL LOCATION

Genetic locus: INA (human) mapping to 10q24.33; Ina (mouse) mapping to 19 C3.

## SOURCE

α-internexin (2E3) is a mouse monoclonal antibody raised against full length α-internexin of rat origin.

## PRODUCT

Each vial contains 50 µg $IgG_1$ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

## APPLICATIONS

α-internexin (2E3) is recommended for detection of α-internexin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

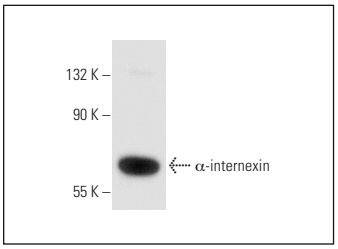
Suitable for use as control antibody for α-internexin siRNA (h): sc-41992, α-internexin siRNA (m): sc-41993, α-internexin shRNA Plasmid (h): sc-41992-SH, α-internexin shRNA Plasmid (m): sc-41993-SH, α-internexin shRNA (h) Lentiviral Particles: sc-41992-V and α-internexin shRNA (m) Lentiviral Particles: sc-41993-V.

Molecular Weight (predicted) of α-internexin: 55 kDa.

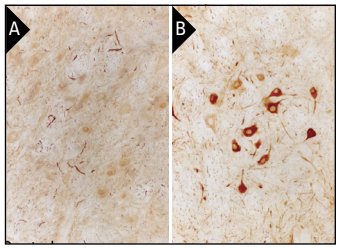
Molecular Weight (observed) of α-internexin: 56/66 kDa.

Positive Controls: rat brain extract: sc-2392, IMR-32 cell lysate: sc-2409 or HeLa whole cell lysate: sc-2200.

## DATA




α-internexin (2E3): sc-58478. Western blot analysis of α-internexin expression in IMR-32 whole cell lysate.




α-internexin (2E3): sc-58478. Immunoperoxidase staining of formalin-fixed, paraffin-embedded rat facial nucleus tissue before (**A**) and after (**B**) facial nerve lesion showing nuclear localization.

## SELECT PRODUCT CITATIONS


1. Kobayashi, Z., et al. 2013. Atypical FTLD-FUS associated with ALS-TDP: a case report. Neuropathology 33: 83-86.
2. Kobayashi, Z., et al. 2013. Pathological features of FTLD-FUS in a Japanese population: analyses of nine cases. J. Neurol. Sci. 335: 89-95.
3. Michaud, K., et al. 2018. Impact of 9p deletion and p16, cyclin D1, and Myc hyperexpression on the outcome of anaplastic oligodendrogliomas. PLoS ONE 13: e0193213.


## RESEARCH USE

For research use only, not for use in diagnostic procedures.