

α -internexin (1D2): sc-58477

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

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2. Fliegner, K.H., Kaplan, M.P., Wood, T.L., Pintar, J.E. and Liem, R.K. 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., Morris, P.J., Lakin, N.D., Theil, T., Ching, G.Y., Lillycrop, K.A., Moroy, T., Liem, R.K. and Latchman, D.S. 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., Mitake, S., Okumura-Noji, K., Shimizu, H., Tada, T. and Fujii, T. 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. and Liem, R.K. 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 (1D2) is a mouse monoclonal antibody raised against recombinant α -internexin of rat origin.

PRODUCT

Each vial contains 500 μ l culture supernatant in PBS with 0.09% sodium azide and 1% BSA.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

APPLICATIONS

α -internexin (1D2) is recommended for detection of α -internexin of mouse, rat, human and cat origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:1000-1:5000), immunoprecipitation [10-20 μ l per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:2500).

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.

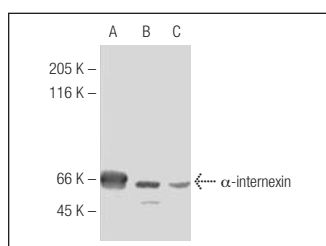
Molecular Weight of α -internexin: 66 kDa.

Positive Controls: rat brain extract: sc-2392, cat cerebral cortex tissue or human cerebral cortex tissue.

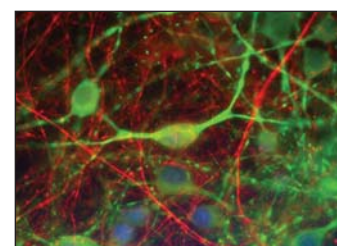
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



α -internexin (1D2): sc-58477. Western blot analysis of α -internexin expression in rat brain (A), cat cerebral cortex (B) and human cerebral cortex (C) tissue extracts.



α -internexin (1D2): sc-58477. Immunofluorescence staining of methanol-fixed rat CNS cells showing neuronal axon localization (red).

RESEARCH USE

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

PROTOCOLS

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