

α -internexin (G-9): sc-271302

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.

CHROMOSOMAL LOCATION

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

SOURCE

α -internexin (G-9) is a mouse monoclonal antibody raised against amino acids 410-499 mapping at the C-terminus of α -internexin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

α -internexin (G-9) is available conjugated to agarose (sc-271302 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271302 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271302 PE), fluorescein (sc-271302 FITC), Alexa Fluor® 488 (sc-271302 AF488), Alexa Fluor® 546 (sc-271302 AF546), Alexa Fluor® 594 (sc-271302 AF594) or Alexa Fluor® 647 (sc-271302 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271302 AF680) or Alexa Fluor® 790 (sc-271302 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

α -internexin (G-9) is recommended for detection of α -internexin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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.

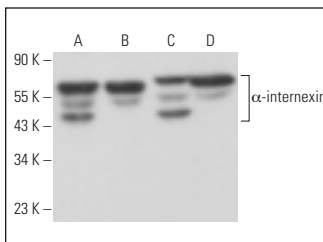
Molecular Weight (observed) of α -internexin: 56/66 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, rat cerebellum extract: sc-2398 or mouse brain extract: sc-2253.

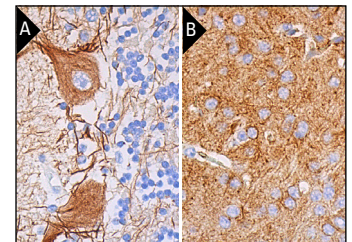
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



α -internexin (G-9): sc-271302. Western blot analysis of α -internexin expression in human cerebral cortex (A), mouse brain (B), rat cerebellum (C) and rat hippocampus (D) tissue extracts.



α -internexin (G-9): sc-271302. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of Purkinje cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse brain tissue showing cytoplasmic staining of neuronal cells and neuropil staining (B).

STORAGE

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