SANTA CRUZ BIOTECHNOLOGY, INC.

α-internexin (G-9): sc-271302

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 µg IgG_1 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 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271302 HRP), 200 µg/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 µg/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 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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 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.

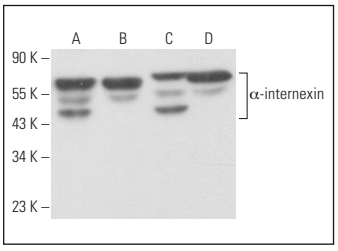
Molecular Weight (observed) of α-internexin: 56/66 kDa.

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

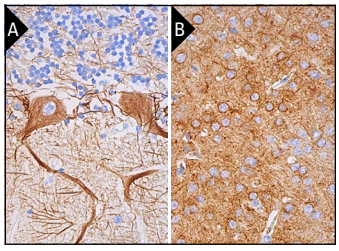
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-IgGκ 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 cytoplamsic 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.