

striatin (6): sc-136084

BACKGROUND

Striatin, SG2NA and zinedin, the three mammalian members of the striatin family, are multimodular, WD-repeat and calmodulin-binding proteins. Zinedin and SG2NA share with striatin identical protein-protein interaction domains and the same overall domain structure. All three proteins are both cytosolic and membrane-bound and bind calmodulin in the presence of calcium. Striatin is a neuronal, intracellular protein strictly expressed in the somatodendritic compartment, including spines and subsets of neurons, and is considered as a marker of neuronal polarity. Downregulation of striatin, which is expressed in a few subsets of neurons, impairs the growth of dendrites as well as rat locomotor activity. Zinedin is mainly expressed in the central nervous system, whereas SG2NA is mainly expressed in the brain and muscle.

REFERENCES

- Castets, F., et al. 1996. A novel calmodulin-binding protein, belonging to the WD-repeat family, is localized in dendrites of a subset of CNS neurons. *J. Cell Biol.* 134: 1051-1062.
- Kachidian, P., et al. 1998. Relationships between striatin-containing neurons and cortical or thalamic afferent fibers in the rat striatum: an ultrastructural study by dual labeling. *Neuroscience* 85: 111-122.
- Salin, P., et al. 1998. Distribution of striatin, a newly identified calmodulin-binding protein in the rat brain: an *in situ* hybridization and immunocytochemical study. *J. Comp. Neurol.* 397: 41-59.
- Bartoli, M., et al. 1999. Down-regulation of striatin, a neuronal calmodulin-binding protein, impairs rat locomotor activity. *J. Neurobiol.* 40: 234-243.
- Castets, F., et al. 2000. Zinedin, SG2NA, and striatin are calmodulin-binding, WD repeat proteins principally expressed in the brain. *J. Biol. Chem.* 275: 19970-19977.
- Baillat, G., et al. 2001. Molecular cloning and characterization of phocein, a protein found from the Golgi complex to dendritic spines. *Mol. Biol. Cell* 12: 663-673.
- Poggeler, S., et al. 2004. A WD40 repeat protein regulates fungal cell differentiation and can be replaced functionally by the mammalian homologue striatin. *Eukaryot. Cell* 3: 232-240.

CHROMOSOMAL LOCATION

Genetic locus: STRN (human) mapping to 2p22.2; Strn (mouse) mapping to 17 E3.

SOURCE

striatin (6) is a mouse monoclonal antibody raised against amino acids 450-600 of striatin of rat origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

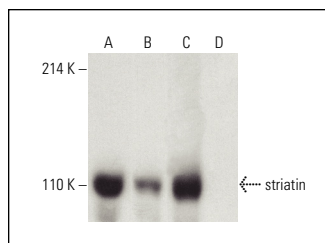
striatin (6) is recommended for detection of striatin of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for striatin siRNA (h): sc-37649, striatin siRNA (m): sc-37650, striatin shRNA Plasmid (h): sc-37649-SH, striatin shRNA Plasmid (m): sc-37650-SH, striatin shRNA (h) Lentiviral Particles: sc-37649-V and striatin shRNA (m) Lentiviral Particles: sc-37650-V.

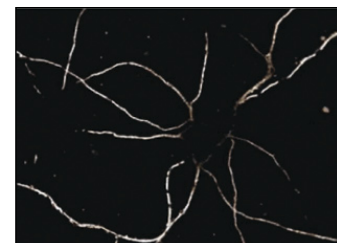
Molecular Weight of striatin: 110 kDa.

Positive Controls: rat brain extract: sc-2392, HEL 92.1.7 cell lysate: sc-2270 or NIH/3T3 whole cell lysate: sc-2210.

DATA



striatin (6): sc-136084. Western blot analysis of striatin expression in HEL 92.1.7 (A) and NIH/3T3 (B) whole cell lysates and rat brain (C) and rat heart (D) tissue extracts. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



striatin (6): sc-136084. Immunofluorescence staining of rat neuron cells showing membrane localization.

SELECT PRODUCT CITATIONS

- Chen, Y.K., et al. 2012. CTTNBP2, but not CTTNBP2NL, regulates dendritic spinogenesis and synaptic distribution of the striatin-PP2A complex. *Mol. Biol. Cell* 23: 4383-4392.
- Inthachart, K., et al. 2019. Aldosterone rapidly enhances levels of the striatin and caveolin-1 proteins in rat kidney: the role of the mineralocorticoid receptor. *Endocrinol. Metab.* 34: 291-301.
- Kang, J.Y., et al. 2020. Therapeutic potential of miR-21 regulation by human peripheral blood derived-small extracellular vesicles in myocardial infarction. *Clin. Sci.* 134: 985-999.
- Shih, P.Y., et al. 2020. CTTNBP2 controls synaptic expression of zinc-related autism-associated proteins and regulates synapse formation and autism-like behaviors. *Cell Rep.* 31: 107700.
- Hu, Z., et al. 2021. ULK1 phosphorylation of striatin activates protein phosphatase 2A and autophagy. *Cell Rep.* 36: 109762.

STORAGE

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