

SG2NA (S68): sc-13562

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 somato-dendritic 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

1. 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.
2. 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.
3. 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.

CHROMOSOMAL LOCATION

Genetic locus: STRN3 (human) mapping to 14q12; Strn3 (mouse) mapping to 12 C1.

SOURCE

SG2NA (S68) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 227-243 of SG2NA of human origin.

PRODUCT

Each vial contains 100 μ l ascites containing IgG₁ kappa light chain with < 0.1% sodium azide.

APPLICATIONS

SG2NA (S68) is recommended for detection of SG2NA of mouse, rat, human and monkey origin by Western Blotting (starting dilution: to be determined by researcher, dilution range 1:100-1:5000) and immunoprecipitation [1-2 μ l per 100-500 μ g of total protein (1 ml of cell lysate)]; non cross-reactive with striatin or other PP2A subunits.

Suitable for use as control antibody for SG2NA siRNA (h): sc-37647, SG2NA siRNA (m): sc-37648, SG2NA shRNA Plasmid (h): sc-37647-SH, SG2NA shRNA Plasmid (m): sc-37648-SH, SG2NA shRNA (h) Lentiviral Particles: sc-37647-V and SG2NA shRNA (m) Lentiviral Particles: sc-37648-V.

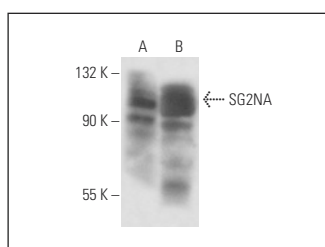
Molecular Weight of SG2NA: 94 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

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).

DATA



SG2NA (S68): sc-13562. Western blot analysis of SG2NA expression in HeLa (A) and K-562 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Gordon, J., et al. 2011. Protein phosphatase 2a (PP2A) binds within the oligomerization domain of striatin and regulates the phosphorylation and activation of the mammalian Ste20-like kinase Mst3. *BMC Biochem.* 12: 54.
2. Tanti, G.K. and Goswami, S.K. 2014. SG2NA recruits DJ-1 and Akt into the mitochondria and membrane to protect cells from oxidative damage. *Free Radic. Biol. Med.* 75: 1-13.
3. Pandey, S., et al. 2017. GSK3 β and ERK regulate the expression of 78 kDa SG2NA and ectopic modulation of its level affects phases of cell cycle. *Sci. Rep.* 7: 7555.
4. Bae, S.J., et al. 2020. STK25 suppresses Hippo signaling by regulating SAV1-STRIPAK antagonism. *Elife* 9: e54863.
5. Jeong, B.C., et al. 2021. Cryo-EM structure of the Hippo signaling integrator human STRIPAK. *Nat. Struct. Mol. Biol.* 28: 290-299.

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.

RESEARCH USE

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

PROTOCOLS

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