SANTA CRUZ BIOTECHNOLOGY, INC.

ShrmL (T-19): sc-10305

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Shrm is a PDZ domain protein which regulates aspects of cytoarchitecture required for proper neuralation. PDZ domains mediate protein-protein interactions which facilitate membrane protein localization and signaling complex assembly. Mutation of the mouse Shrm gene causes neural tube defects (NTDs) attributed to failure of the neural tube to close during development. Targeted mutation studies have identified a number of factors which regulate neural tube morphogenesis. Shrm is strongly expressed in neural epithelium at the time of cranial tube closure. Shrm is a cytoskeletal protein which localizes to adherens junctions and directly binds F-actin. The Shrm protein can exist in a short and long form, designated ShrmS and ShrmL, respectively.

REFERENCES

1. Chen, Z.F. and Behringer, R.R. 1995. twist is required in head mesenchyme for cranial neural tube morphogenesis. Genes Dev. 9: 686-699.
2. Ponting, C.P., Phillips, C., Davies, K.E. and Blake, D.J. 1997. PDZ domains: targeting signalling molecules to sub-membranous sites. Bioessays 19: 469-479.
3. Songyang, Z., Fanning, A.S., Fu, C., Xu, J., Marfatia, S.M., Chishti, A.H., Crompton, A., Chan, A.C., Anderson, J.M. and Cantley, L.C. 1997. Recognition of unique carboxyl-terminal motifs by distinct PDZ domains. Science 275: 73-77.
4. Hildebrand, J.D. and Soriano, P. 1999. Shroom, a PDZ domain-containing actin-binding protein, is required for neural tube morphogenesis in mice. Cell 99: 485-497.
5. Kuan, C.Y., Yang, D.D., Samanta Roy. D.R., Davis, R.J., Rakic, P. and Flavell, R.A. 1999. The Jnk1 and Jnk2 protein kinases are required for regional specific apoptosis during early brain development. Neuron 22: 667-676.

CHROMOSOMAL LOCATION

Genetic locus: Shroom3 (mouse) mapping to 5 E2.

SOURCE

ShrmL (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of ShrmL of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10305 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

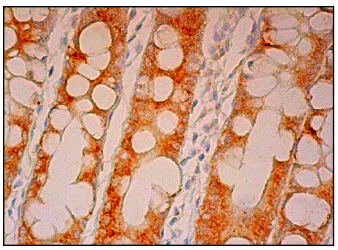
APPLICATIONS

ShrmL (T-19) is recommended for detection of Shrm long form of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



ShrmL (T-19): sc-10305. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells.

PROTOCOLS

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