

# Shrm (K-19): sc-10311

## BACKGROUND

The gene *shrm* encodes 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* 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 with a size of ~205 kDa which localizes to adherens junctions and directly binds F-actin. The Shrm protein can exist in a short and long form, ShrmS and ShrmL respectively.

## REFERENCES

- Chen, Z.F. and Behringer, R.R. 1995. *twist* is required in head mesenchyme for cranial neural tube morphogenesis. *Genes Dev.* 9: 686-699.
- 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.
- 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.
- 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.
- 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.

## SOURCE

Shrm (K-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Shrm 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-10311 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

Shrm (K-19) is recommended for detection of Shrm long and short forms of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Shrm siRNA (h): sc-42248, Shrm siRNA (m): sc-42249, Shrm shRNA Plasmid (h): sc-42248-SH, Shrm shRNA Plasmid (m): sc-42249-SH, Shrm shRNA (h) Lentiviral Particles: sc-42248-V and Shrm shRNA (m) Lentiviral Particles: sc-42249-V.

Molecular Weight of Shrm: 205 kDa.

Positive Controls: H4 cell lysate: sc-2408, IMR-32 cell lysate: sc-2409 or T98G cell lysate: sc-2294.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.