

# SHROOM4 (G-14): sc-169310

## BACKGROUND

SHROOM4 is a 1,493 amino acid protein that belongs to the Shroom family, which contain an N-terminal PDZ domain and a C-terminal ASD2 motif. SHROOM4 interacts directly with F-actin. As a probable regulator of cytoskeletal architecture that plays an important role in development, SHROOM4 may regulate cellular and cytoskeletal architecture by modulating the spatial distribution of myosin II. Defects in SHROOM4 are the cause of mental retardation syndromic X-linked Stocco dos Santos type (SDSX). SDSX is a syndrome characterized by severe mental retardation with hyperactivity, aggressive behavior, delayed or no speech and seizures. Additional features of SDSX include congenital bilateral hip luxation, short stature and kyphosis. Existing as two alternatively spliced isoforms, the SHROOM4 gene is conserved in canine, mouse and rat, and maps to human chromosome Xp11.22.

## REFERENCES

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2. Stocco dos Santos, R.C., et al. 2003. Stocco dos Santos X-linked mental retardation syndrome: clinical elucidation and localization to Xp11.3-Xq21.3. *Am. J. Med. Genet. A* 118A: 255-259.
3. Hagens, O., et al. 2006. A new standard nomenclature for proteins related to Apx and Shroom. *BMC Cell Biol.* 7: 18.
4. Hagens, O., et al. 2006. Disruptions of the novel KIAA1202 gene are associated with X-linked mental retardation. *Hum. Genet.* 118: 578-590.
5. Dietz, M.L., et al. 2006. Differential actin-dependent localization modulates the evolutionarily conserved activity of Shroom family proteins. *J. Biol. Chem.* 281: 20542-20554.
6. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 300579. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Yoder, M., et al. 2007. Shroom4 (Kiaa1202) is an actin-associated protein implicated in cytoskeletal organization. *Cell Motil. Cytoskeleton* 64: 49-63.
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## CHROMOSOMAL LOCATION

Genetic locus: SHROOM4 (human) mapping to Xp11.22; Shroom4 (mouse) mapping to X A1.1.

## SOURCE

SHROOM4 (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SHROOM4 of human 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-169310 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SHROOM4 (G-14) is recommended for detection of SHROOM4 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); non cross-reactive with SHROOM1.

SHROOM4 (G-14) is also recommended for detection of SHROOM4 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for SHROOM4 siRNA (h): sc-91150, SHROOM4 siRNA (m): sc-153456, SHROOM4 shRNA Plasmid (h): sc-91150-SH, SHROOM4 shRNA Plasmid (m): sc-153456-SH, SHROOM4 shRNA (h) Lentiviral Particles: sc-91150-V and SHROOM4 shRNA (m) Lentiviral Particles: sc-153456-V.

Molecular Weight of SHROOM4 isoform 1: 165 kDa.

Molecular Weight of SHROOM4 isoform 2: 152 kDa.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## 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.

## PROTOCOLS

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