

# STON2 (I-13): sc-163390

## BACKGROUND

STON2 (stonin 2), also known as STN2, STNB or STNB2, is a 905 amino acid protein that localizes to both the cytoplasm and the membrane and contains one stonin homology domain and one  $\mu$  homology domain. Expressed ubiquitously, STON2 interacts with Synaptotagmin I and Synaptotagmin II and functions as an adaptor protein that is involved in endocytotic machinery and may also play a role in vesicle recycling and clathrin-coated vesicle uncoating. Multiple isoforms of STON2 exist due to alternative slicing events. The gene encoding STON2 maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presenilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder  $\alpha$ 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

## REFERENCES

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2. Walther, K., et al. 2001. Human stoned B interacts with AP-2 and Synaptotagmin and facilitates clathrin-coated vesicle uncoating. *EMBO Rep.* 2: 634-640.
3. Martina, J.A., et al. 2001. Stonin 2: an adaptor-like protein that interacts with components of the endocytic machinery. *J. Cell Biol.* 15: 1111-1120.
4. Walther, K., et al. 2004. Functional dissection of the interactions of stonin 2 with the adaptor complex AP-2 and Synaptotagmin. *Proc. Natl. Acad. Sci. USA* 101: 964-969.
5. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608467. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Diril, M.K., et al. 2006. Stonin 2 is an AP-2-dependent endocytic sorting adaptor for Synaptotagmin internalization and recycling. *Dev. Cell* 10: 233-244.
7. Jung, N., et al. 2007. Molecular basis of synaptic vesicle cargo recognition by the endocytic sorting adaptor stonin 2. *J. Cell Biol.* 179: 1497-1510.

## CHROMOSOMAL LOCATION

Genetic locus: STON2 (human) mapping to 14q31.1; Ston2 (mouse) mapping to 12 D3.

## SOURCE

STON2 (I-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of STON2 of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-163390 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

STON2 (I-13) is recommended for detection of STON2 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 STON1.

Suitable for use as control antibody for STON2 siRNA (h): sc-92095, STON2 siRNA (m): sc-153905, STON2 shRNA Plasmid (h): sc-92095-SH, STON2 shRNA Plasmid (m): sc-153905-SH, STON2 shRNA (h) Lentiviral Particles: sc-92095-V and STON2 shRNA (m) Lentiviral Particles: sc-153905-V.

Molecular Weight of STON2: 88 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™ 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.

## 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.



Try **STON2 (A-5): sc-514542**, our highly recommended monoclonal alternative to STON2 (I-13).