



## STOP (M-300): sc-68868

### BACKGROUND

Microtubules in the cytoplasm of mammalian cells usually depolarize rapidly when exposed to cold temperature or to assembly-inhibiting drugs. Some cell types, however, contain sub-populations of microtubules called "cold-stable microtubules" that resist these depolymerizing conditions. This stabilization is due mainly to polymer association with a 952 amino acid neuronal protein designated STOP (stable tubule only polypeptide). The central region of STOP contains five tandem repeats of 46 amino acids. STOP also contains a SH3-binding motif near its N-terminus. It is present in the cell body and throughout the axon. The STOP protein action can be extreme, inducing resistance at temperatures as low as -80° C.

### REFERENCES

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6. Denarier, E., Fourest-Lieuvin, A., Bosc, C., Pirollet, F., Chapel, A., Margolis, R.L. and Job, D. 1998. Nonneuronal isoforms of STOP protein are responsible for microtubule cold stability in mammalian fibroblasts. *Proc. Natl. Acad. Sci. USA* 95: 6055-6060.
7. Guillaud, L., Bosc, C., Fourest-Lieuvin, A., Denarier, E., Pirollet, F., Lafanechère, L. and Job, D. 1998. STOP proteins are responsible for the high degree of microtubule stabilization observed in neuronal cells. *J. Cell Biol.* 142: 167-179.
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### CHROMOSOMAL LOCATION

Genetic locus: MAP6 (human) mapping to 11q13.3; Mtap6 (mouse) mapping to 7 E2-F1.

### SOURCE

STOP (M-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of STOP 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.

### APPLICATIONS

STOP (M-300) is recommended for detection of STOP of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], 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 STOP siRNA (h): sc-63359 and STOP siRNA (m): sc-63360.

Molecular Weight of STOP: 145 kDa.

Positive Controls: rat brain extract: sc-2392.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ 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.