

# STI1 (E-7): sc-390224

## BACKGROUND

Stress-induced-phosphoprotein 1 (STI1) functions as a co-chaperone for HSP 70 and HSP 90 during heat shock response. STI1 exists as either a monomer or a dimer, and this conformational flexibility facilitates its function in organizing HSP 70/HSP 90. HSP 90 acts as an ATPase, and requires the recruitment of client proteins and proper conformation to function. STI1 acts as a "scaffold" for client protein recruitment to the relaxed, ADP-bound conformation of HSP 90, thus suppressing ATP turnover during the loading phase and allowing proper function.

## REFERENCES

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- Siligardi, G., et al. 2002. Regulation of Hsp90 ATPase activity by the co-chaperone Cdc37p/p50<sup>cdc37</sup>. *J. Biol. Chem.* 277: 20151-20159.
- Abbas-Terki, T., et al. 2002. The Hsp90 co-chaperones Cdc37 and STI1 interact physically and genetically. *Biol. Chem.* 383: 1335-1342.
- Zanata, S.M., et al. 2002. Stress-inducible protein 1 is a cell surface ligand for cellular prion that triggers neuroprotection. *EMBO J.* 21: 3307-3316.
- Richter, K., et al. 2003. STI1 is a non-competitive inhibitor of the Hsp90 ATPase. Binding prevents the N-terminal dimerization reaction during the atpase cycle. *J. Biol. Chem.* 278: 10328-10333.
- Wegele, H., et al. 2003. STI1 is a novel activator of the Ssa proteins. *J. Biol. Chem.* 278: 25970-25976.
- Lee, P., et al. 2004. STI1 and Cdc37 can stabilize Hsp90 in chaperone complexes with a protein kinase. *Mol. Biol. Cell* 15: 1785-1792.
- Sakudo, A., et al. 2005. PrP cooperates with STI1 to regulate SOD activity in PrP-deficient neuronal cell line. *Biochem. Biophys. Res. Commun.* 328: 14-19.

## CHROMOSOMAL LOCATION

Genetic locus: STIP1 (human) mapping to 11q13.1; Stip1 (mouse) mapping to 19 A.

## SOURCE

STI1 (E-7) is a mouse monoclonal antibody raised against amino acids 203-453 mapping near the C-terminus of STI1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

STI1 (E-7) is recommended for detection of STI1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 STI1 siRNA (h): sc-106905, STI1 siRNA (m): sc-153893, STI1 shRNA Plasmid (h): sc-106905-SH, STI1 shRNA Plasmid (m): sc-153893-SH, STI1 shRNA (h) Lentiviral Particles: sc-106905-V and STI1 shRNA (m) Lentiviral Particles: sc-153893-V.

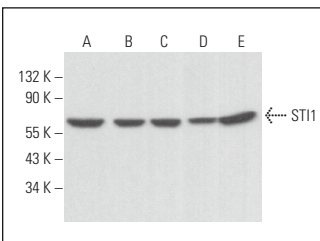
Molecular Weight of STI1: 63 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or A-431 whole cell lysate: sc-2201.

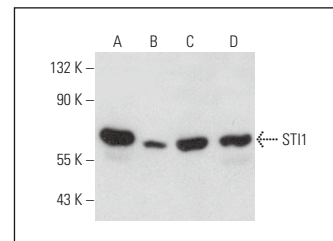
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



STI1 (E-7): sc-390224. Western blot analysis of STI1 expression in Jurkat (A), M1 (B), WEHI-231 (C), MCF7 (D) and F9 (E) whole cell lysates.



STI1 (E-7): sc-390224. Western blot analysis of STI1 expression in HeLa (A), A-431 (B), A549 (C) and NIH/3T3 (D) whole cell lysates.

## 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) for detailed protocols and support products.