

STS-1 (C-20): sc-69336

BACKGROUND

STS-1 (suppressor of T cell receptor signaling 1), also known as UBASH3B (ubiquitin associated and SH3 domain containing, B) or p70 (Cbl-interacting protein p70), is a member of the suppressor of TCR (T cell receptor) signaling family of proteins and negatively regulates signaling pathways downstream of the TCR. Localizing to the cytoplasm and nucleus, STS-1 is widely expressed with little to no expression in pancreas, ovary and heart. STS-1 contains an N-terminal UBA domain, one SH3 domain and a C-terminal domain that is similar to the catalytic domain found in phosphoglycerate mutases. STS-1 exhibits phosphatase activity and is recognized as a Cbl-interacting protein. Upon ligand binding, STS-1 is recruited to activated EGFR complexes and prevents the endocytosis of EGFR by inhibiting receptor internalization and reducing the number of endocytic vesicles containing EGFR. STS-1 is also capable of inhibiting the endocytosis of PDGFR, suggesting a role for STS-1 in regulating receptor tyrosine kinase endocytosis and controlling growth factor-induced cellular functions.

REFERENCES

- Nagase, T., et al. 2001. Prediction of the coding sequences of unidentified human genes. XXII. The complete sequences of 50 new cDNA clones which code for large proteins. *DNA Res.* 8: 319-327.
- Carpino, N., et al. 2002. Identification, cDNA cloning, and targeted deletion of p70, a novel, ubiquitously expressed SH3 domain-containing protein. *Mol. Cell. Biol.* 22: 7491-7500.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609201. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Kowanetz, K., et al. 2004. Suppressors of T cell receptor signaling STS-1 and STS-2 bind to Cbl and inhibit endocytosis of receptor tyrosine kinases. *J. Biol. Chem.* 279: 32786-32795.
- Carpino, N., et al. 2004. Regulation of ZAP-70 activation and TCR signaling by two related proteins, STS-1 and STS-2. *Immunity* 20: 37-46.

CHROMOSOMAL LOCATION

Genetic locus: UBASH3B (human) mapping to 11q24.1; Ubash3b (mouse) mapping to 9 A5.1.

SOURCE

STS-1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of STS-1 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-69336 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

STS-1 (C-20) is recommended for detection of STS-1 of mouse, rat and 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).

STS-1 (C-20) is also recommended for detection of STS-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for STS-1 siRNA (h): sc-76596, STS-1 siRNA (m): sc-76597, STS-1 shRNA Plasmid (h): sc-76596-SH, STS-1 shRNA Plasmid (m): sc-76597-SH, STS-1 shRNA (h) Lentiviral Particles: sc-76596-V and STS-1 shRNA (m) Lentiviral Particles: sc-76597-V.

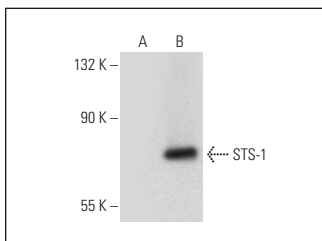
Molecular Weight of STS-1: 70 kDa.

Positive Controls: STS-1 (m): 293T Lysate: sc-123827.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



STS-1 (C-20): sc-69336. Western blot analysis of STS-1 expression in non-transfected: sc-117752 (A) and mouse STS-1 transfected: sc-123827 (B) 293T whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.