

STS-1 (E-8): sc-514612

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

1. 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.
2. 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.
3. 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/>
4. 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.

CHROMOSOMAL LOCATION

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

SOURCE

STS-1 (E-8) is a mouse monoclonal antibody raised against amino acids 101-208 mapping within an internal region of STS-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STS-1 (E-8) is available conjugated to agarose (sc-514612 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514612 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514612 PE), fluorescein (sc-514612 FITC), Alexa Fluor® 488 (sc-514612 AF488), Alexa Fluor® 546 (sc-514612 AF546), Alexa Fluor® 594 (sc-514612 AF594) or Alexa Fluor® 647 (sc-514612 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514612 AF680) or Alexa Fluor® 790 (sc-514612 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

STS-1 (E-8) is recommended for detection of STS-1 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 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.

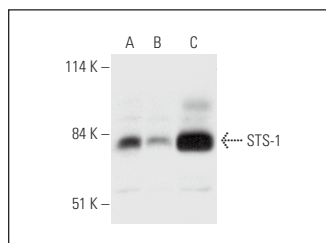
Molecular Weight of STS-1: 70 kDa.

Positive Controls: STS-1 (m): 293T Lysate: sc-123827, HCT-116 whole cell lysate: sc-364175 or Hep G2 cell lysate: sc-2227.

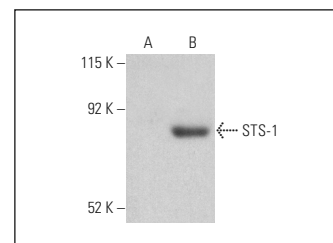
RECOMMENDED SUPPORT REAGENTS

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



STS-1 (E-8): sc-514612. Western blot analysis of STS-1 expression in Hep G2 (A), A-431 (B) and HCT-116 (C) whole cell lysates.



STS-1 (E-8) HRP: sc-514612 HRP. Direct 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.

RESEARCH USE

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

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