SANTA CRUZ BIOTECHNOLOGY, INC.

STS-1 (N-20): sc-69337



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 and controlling growth factor-induced cellular functions.

REFERENCES

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- 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.
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- 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.
- 5. 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.
- Kleinman, H., et al. 2006. Crystallization and initial crystal characterization of the C-terminal phosphoglycerate mutase homology domain of STS-1. Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun. 62: 218-220.
- 7. Raguz, J., et al. 2007. Suppressor of T cell receptor signalling 1 and 2 differentially regulate endocytosis and signalling of receptor tyrosine kinases. FEBS Lett. 581: 4767-4772.
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CHROMOSOMAL LOCATION

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

SOURCE

STS-1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of STS-1 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-69337 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

STS-1 (N-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 μ g per 100-500 μ g 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 (N-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.

DATA



STS-1 (N-20): sc-69337. Western blot analysis of STS-1 expression in non-transfected: sc-117752 (\pmb{A}) and mouse STS-1 transfected: sc-123827 (\pmb{B}) 2937 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.

MONOS Satisfation Guaranteed

Try **STS-1 (E-8): sc-514612**, our highly recommended monoclonal alternative to STS-1 (N-20).