

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

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

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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.
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.
6. 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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STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: Ubash3b (mouse) mapping to 9 A5.1.

PRODUCT

STS-1 (m): 293T Lysate represents a lysate of mouse STS-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

STS-1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive STS-1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

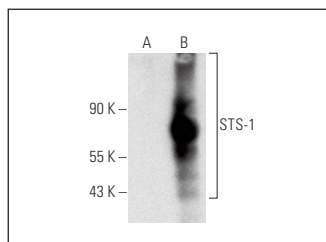
STS-1 (E-8): sc-514612 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse STS-1 expression in STS-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



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

RESEARCH USE

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

PROTOCOLS

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