SANTA CRUZ BIOTECHNOLOGY, INC.

SR-β (h): 293T Lysate: sc-117123

BACKGROUND

The β-subunit of the signal recognition particle receptor (SR-β), a member of the Ras family of small molecular weight GTPases, targets nascent polypeptides to the protein translocation machinery in the ER. The signal recognition particle receptor (SRP) is a heterodimer of two polypeptides, SR-α and SR-β. The interaction of three GTPases, SRP54, SR-α, and SR-β, controls cotranslational protein transport to the ER. SR-β regulates the interaction of SR with the ribosome and thereby allows SR-α to scan membrane-bound ribosomes for the presence of SRP.

REFERENCES

1. Young, J.C., et al. 1995. An amino-terminal domain containing hydrophobic and hydrophilic sequences binds the signal recognition particle receptor α subunit to the β subunit on the endoplasmic reticulum membrane. J. Biol. Chem. 270: 15650-15657.
2. Bacher, G., et al. 1999. The ribosome regulates the GTPase of the β-subunit of the signal recognition particle receptor. J. Cell Biol. 146: 723-730.
3. Legate, K.R., et al. 2000. Nucleotide-dependent binding of the GTPase domain of the signal recognition particle receptor β-subunit to the α-subunit. J. Biol. Chem. 275: 27439-27446.
4. Helmers, J., et al. 2003.The β-subunit of the protein-conducting channel of the endoplasmic reticulum functions as the guanine nucleotide exchange factor for the β-subunit of the signal recognition particle receptor. J. Biol. Chem. 278: 23686-23690.
5. Legate, K.R., et al. 2003. The β-subunit of the signal recognition particle receptor is a novel GTP-binding protein without intrinsic GTPase activity. J. Biol. Chem. 278: 27712-27720.

CHROMOSOMAL LOCATION

Genetic locus: SRPRB (human) mapping to 3q22.1.

PRODUCT

SR-β (h): 293T Lysate represents a lysate of human SR-β transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

SR-β (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive SR-β antibodies. Recommended use: 10-20 µl per lane.

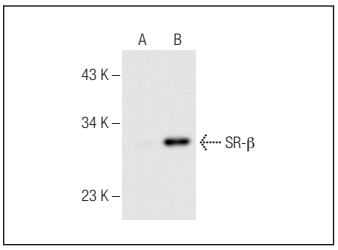
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

SR-β (D-4): sc-376723 is recommended as a positive control antibody for Western Blot analysis of enhanced human SR-β expression in SR-β 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



SR-β (D-4): sc-376723. Western blot analysis of SR-β expression in non-transfected: sc-117752 (**A**) and human SR-β transfected: sc-117123 (**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.