SANTA CRUZ BIOTECHNOLOGY, INC.

SR-β (yN-14): sc-28181

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 2 polypeptides, SR-α and SR-β, that are 72kD and 30kD respectively. 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. Legate KR, 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.
5. 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.

SOURCE

SR-β (yN-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SR-β of *Saccharomyces cerevisiae* 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-28181 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

PROTOCOLS

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

APPLICATIONS

SR-β (yN-14) is recommended for detection of SR-β of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of SR-β: 30 kDa.

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.