



SR- β (T-14): sc-100171

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 . 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, 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.
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.

CHROMOSOMAL LOCATION

Genetic locus: SRPRB (human) mapping to 3q22.1; Srprb (mouse) mapping to 9 F1.

SOURCE

SR- β (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SR- β of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-100171 P, (100 μ g 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.

APPLICATIONS

SR- β (T-14) is recommended for detection of SR- β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other SR family members.

Suitable for use as control antibody for SR- β siRNA (h): sc-78449, SR- β siRNA (m): sc-153813, SR- β shRNA Plasmid (h): sc-78449-SH, SR- β shRNA Plasmid (m): sc-153813-SH, SR- β shRNA (h) Lentiviral Particles: sc-78449-V and SR- β shRNA (m) Lentiviral Particles: sc-153813-V.

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. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

PROTOCOLS

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