SANTA CRUZ BIOTECHNOLOGY, INC.

SEC23 (H-300): sc-20789

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

COPII-coated vesicles form on the endoplasmic reticulum by the stepwise recruitment of three cytosolic components: Sar1-GTP to initiate coat formation, Sec23/24 heterodimer to select SNARE and cargo molecules, and Sec13/31 to induce coat polymerization and membrane deformation. Sec23A is the functional human counterpart of the yeast COPII component Sec23p which suggests that it plays a similar role in mammalian protein export from the ER. Both Sec23 isoforms (Sec23A and Sec23B) have a molecular mass of 85 kDa. Mouse Sec23 is most abundant in brain and fibroblasts.

REFERENCES

1. Ruohola, H., et al. 1988. Reconstitution of protein transport from the endoplasmic reticulum to the Golgi complex in yeast: the acceptor Golgi compartment is defective in the sec23 mutant. J. Cell. Biol. 107: 1465-1476.
2. Wadhwa, R., et al. 1993. Identification and differential expression of yeast SEC23-related gene (Msec23) in mouse tissues. FEBS Letts. 315: 193-196.
3. Paccaud, J.P., et al. 1996. Cloning and functional characterization of mammalian homologues of the COPII component Sec23. Mol. Biol. Cell. 7: 1535-1546.
4. Weidler, M., Reinhard, C., Friedrich, G., Wieland, F.T. and Rosch, P. 2000. Structure of the cytoplasmic domain of p23 in solution: implications for the formation of COPI vesicles. Biochem. Biophys. Res. Commun. 271: 401-408.
5. Botelho, R.J., Hackam, D.J., Schreiber, A.D. and Grinstein, S. 2000. Role of COPI in phagosome maturation. J. Biol. Chem. 275: 15717-15727.
6. Bi, X., et al. 2002. Structure of the Sec23/24-Sar1 pre-budding complex of the COPII vesicle coat. Nature 419: 271-277.
7. Cohen, M., et al. 2003. Ubp3 requires a cofactor, Bre5, to specifically de-ubiquitinate the COPII protein, Sec23. Nat. Cell Biol. 5: 661-667.

SOURCE

SEC23 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 of SEC23 of human origin.

PRODUCT

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

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

SEC23 (H-300) is recommended for detection of SEC23 isoforms A and B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

SEC23 (H-300) is also recommended for detection of SEC23 isoforms A and B in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of SEC23: 85 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or Hep G2 cel lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Chanrion, B., et al. 2007. Physical interaction between the serotonin transporter and neuronal nitric oxide synthase underlies reciprocal modulation of their activity. Proc. Natl. Acad. Sci. USA 104: 8053-8058.