

SEC23 (h2): 293T Lysate: sc-174624

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., Kabacene, A.K. and Ferro-Novick, S. 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., Kaul, S.C., Komatsu, Y., Ikawa, Y., Sarai, A. and Sugimoto, Y. 1993. Identification and differential expression of yeast SEC23-related gene (Msec23) in mouse tissues. *FEBS Lett.* 315: 193-196.
3. Paccard, J.P., Reith, W., Carpentier, J.L., Ravazzola, M., Amherdt, M., Schekman, R. and Orci, L. 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., Corpina, R.A. and Goldberg, J. 2002. Structure of the SEC23/24-Sar1 pre-budding complex of the COPII vesicle coat. *Nature* 419: 271-277.
7. Cohen, M., Stutz, F., Belgareh, N., Haguener-Tsapis, R. and Dargemont, C. 2003. Ubp3 requires a cofactor, Bre5, to specifically de-ubiquitinate the COPII protein, SEC23. *Nat. Cell Biol.* 5: 661-667.

CHROMOSOMAL LOCATION

Genetic locus: SEC23A (human) mapping to 14q21.1, SEC23B (human) mapping to 20p11.23.

PRODUCT

SEC23 (h): 293T Lysate represents a lysate of human SEC23 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.

PROTOCOLS

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

APPLICATIONS

SEC23 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive SEC23 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.

RESEARCH USE

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