SANTA CRUZ BIOTECHNOLOGY, INC.

SEC23 (E-19): sc-12107

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. 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 Lett. 315: 193-196.

CHROMOSOMAL LOCATION

Genetic locus: SEC23A (human) mapping to 14q21.1, SEC23B (human) mapping to20p11.23; Sec23a (mouse) mapping to 12 C1, Sec23b (mouse) mapping to 2 G1.

SOURCE

SEC23 (E-19 is available as either an affinity purified goat (sc-12107) or rabbit (sc-12107-R) polyclonal antibody raised against a peptide mapping near the N-terminus 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.

Blocking peptide available for competition studies, sc-12107 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SEC23 (E-19) 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

SEC23 (E-19) 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: SEC23 (h): 293 Lysate: sc-110590, Jurkat whole cell lysate: sc-2204 or PC-12 cell lysate: sc-2250.

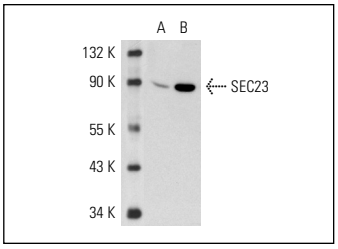
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

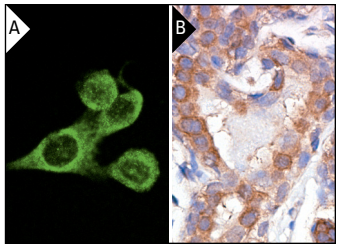
RESEARCH USE

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

DATA



SEC23 (E-19): sc-12107. Western blot analysis of SEC23 expression in non-transfected: sc-110760 (**A**) and human SEC23 transfected: sc-110590 (**B**) 293 whole cell lysates.



SEC23 (E-19): sc-12107. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic localization (**B**).

SELECT PRODUCT CITATIONS

1. Osanai, K., et al. 2005. Expression and characterization of Rab 38, a new member of the Rab small G protein family. Biol. Chem. 386: 143-153.
2. Gretton, S.N., et al. 2005. Mobility of the hepatitis C virus NS4B protein on the endoplasmic reticulum membrane and membrane-associated foci. J. Gen. Virol. 86: 1415-1421.
3. Vazquez-Martinez, R., et al. 2007. Rab18 inhibits secretory activity in neuroendocrine cells by interacting with secretory granules. Traffic 8: 867-882.
4. Yellaturu, C.R., et al. 2009. Insulin enhances posttranslational processing of nascent SREBP-1c by promoting Its phosphorylation and association with COPII vesicles. J. Biol. Chem. 107: 7518-7532.
5. Yellaturu, C.R., et al. 2009. Insulin enhances the biogenesis of nuclear sterol regulatory element-binding protein (SREBP)-1c by posttranscriptional down-regulation of Insig-2A and its dissociation from SREBP cleavage-activating protein (SCAP).SREBP-1c complex. J. Biol. Chem. 284: 31726-31734.
6. Hölzenspies, J.J., et al. 2009. CDC2/SPDY transiently associates with endoplasmic reticulum exit sites during oocyte maturation. BMC Dev. Biol. 9: 8.
7. Nakamura, T., et al. 2010. The PX-RICS-14-3-3ζ/θ complex couples N-cadherin-β-catenin with dynein-dynactin to mediate its export from the endoplasmic reticulum. J. Biol. Chem. 285: 16145-16154.
8. Vento, M.T., et al. 2010. Praf2 is a novel Bcl-x_L/Bcl-2 interacting protein with the ability to modulate survival of cancer cells. PLoS ONE 5: e15636.
9. Adolf, F., et al. 2013. Scission of COPI and COPII vesicles is independent of GTP hydrolysis. Traffic 14: 922-932.

PROTOCOLS

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