SANTA CRUZ BIOTECHNOLOGY, INC.

SEC13 (F-6): sc-514308

BACKGROUND

There are a number of components involved in the secretory pathway of *Saccharomyces cerevisiae,* which are collectively also known as the SEC gene products. Among these proteins, the yeast SAR1 gene encodes a low-molecular-weight GTPase that is essential for the formation of transport vesicles from the endoplasmic reticulum (ER). Vesicular traffic within the early secretory pathway is mediated by COPI- and COPII-coated vesicles. The COPII vesicle coat protein promotes the formation of ER derived transport vesicles that carry secretory proteins to the Golgi complex in yeast. This coat protein consists of Sar1, the SEC23 protein complex containing SEC23 and SEC24, and the SEC13 protein complex containing SEC13 and p150. p150 is encoded by the gene SEC31, which was intially isolated in a genetic screen for mutations that accumulate unprocessed forms of the secretory protein α-factor.

CHROMOSOMAL LOCATION

Genetic locus: SEC13 (human) mapping to 3p25.3; Sec13 (mouse) mapping to 6 E3.

SOURCE

SEC13 (F-6) is a mouse monoclonal antibody raised against amino acids 81-322 mapping at the C-terminus of SEC13 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SEC13 (F-6) is available conjugated to agarose (sc-514308 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514308 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514308 PE), fluorescein (sc-514308 FITC), Alexa Fluor® 488 (sc-514308 AF488), Alexa Fluor® 546 (sc-514308 AF546), Alexa Fluor® 594 (sc-514308 AF594) or Alexa Fluor® 647 (sc-514308 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514308 AF680) or Alexa Fluor® 790 (sc-514308 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

SEC13 (F-6) is recommended for detection of SEC13 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for SEC13 siRNA (h): sc-78504, SEC13 siRNA (m): sc-153298, SEC13 shRNA Plasmid (h): sc-78504-SH, SEC13 shRNA Plasmid (m): sc-153298-SH, SEC13 shRNA (h) Lentiviral Particles: sc-78504-V and SEC13 shRNA (m) Lentiviral Particles: sc-153298-V.

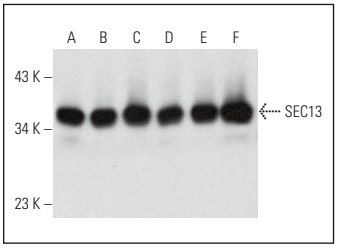
Molecular Weight of SEC13: 36 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, A-431 whole cell lysate: sc-2201 or NCI-H1299 whole cell lysate: sc-364234.

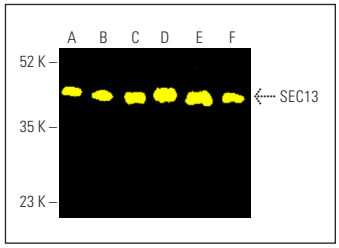
STORAGE

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

DATA



SEC13 (F-6): sc-514308. Western blot analysis of SEC13 expression in A-431 (**A**), NCI-H1299 (**B**), NIH/3T3 (**C**), RAW 264.7 (**D**), RPE-J (**E**) and NRK (**F**) whole cell lysates.



SEC13 (F-6): sc-514308. Fluorescent western blot analysis of SEC13 expression in NCI-H1299 (**A**), RPE-J (**B**), NRK (**C**), Hep G2 (**D**), HUV-EC-C (**E**) and c4 (**F**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_1 BP-CFL 488: sc-533661.

SELECT PRODUCT CITATIONS

1. Pieri, L., et al. 2016. Cellular response of human neuroblastoma cells to α-synuclein fibrils, the main constituent of Lewy bodies. Biochim. Biophys. Acta 1860: 8-19.
2. Peng, M., et al. 2017. SZT2 dictates GATOR control of mTORC1 signalling. Nature 543: 433-437.
3. Chen, T., et al. 2018. SEC13 is a positive regulator of VISA-mediated antiviral signaling. Virus Genes 54: 514-526.
4. Cho, H.J. and Mook-Jung, I. 2020. Amyloid β regulates ER exit sites formation through O-GlcNAcylation triggered by disrupted calcium homeostasis. Biol. Cell 112: 439-451.
5. Yehia, L., et al. 2021. Non-canonical role of wild-type SEC23B in the cellular stress response pathway. Cell Death Dis. 12: 304.
6. van Leeuwen, W., et al. 2022. Stress-induced phase separation of ERES components into Sec bodies precedes ER exit inhibition in mammalian cells. J. Cell Sci. 135: jcs260294.
7. Yu, J., et al. 2023. Deficiency of Perry syndrome-associated $p150^{Glued}$ in midbrain dopaminergic neurons leads to progressive neurodegeneration and endoplasmic reticulum abnormalities. NPJ Parkinsons Dis. 9: 35.
8. Guo, C., et al. 2023. SLC38A2 and glutamine signalling in cDC1s dictate anti-tumour immunity. Nature 620: 200-208.
9. Yan, G., et al. 2023. Genome-wide CRISPR screens identify ILF3 as a mediator of mTORC1-dependent amino acid sensing. Nat. Cell Biol. 25: 754-764.
10. Cheng, H., et al. 2024. *Mycobacterium tuberculosis* produces D-serine under hypoxia to limit $CD8^+$ T cell-dependent immunity in mice. Nat. Microbiol. 9: 1856-1872.

RESEARCH USE

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