SANTA CRUZ BIOTECHNOLOGY, INC.

Exo70 (H-9): sc-514257

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Exocytosis is crucial in membrane trafficking and it mediates hormone and neurotransmitter secretion out of the cell, as well as the incorporation of membrane proteins and lipids to the plasma membrane. It is crucial for cell-cell communication, cell growth and cell polarity. The exocyst complex is a multi-protein complex that consists of Sec3, Sec5, Sec6, Sec8, Sec10, Sec15, Exo70 and Exo84, and is essential for targeting exocytic vesicles to specific docking sites on the plasma membrane. Exo70, also known as EXOC7 (exocyst complex component 7), EXOC1 or 2-5-3p, is a 735 amino acid peripheral membrane protein that is a component of the exocyst complex. Localized to the cytoplasm and the cell membrane, Exo70 plays an essential role in the docking of exocystic vesicles to target sites on the plasma membrane and, specifically, may be involved in Insulin-induced protein docking within the cell. Four isoforms of Exo70 are expressed due to alternative splicing events.

REFERENCES

1. Kee, Y., et al. 1997. Subunit structure of the mammalian exocyst complex. Proc. Natl. Acad. Sci. USA 94: 14438-14443.
2. Kikuno, R., et al. 1999. Prediction of the coding sequences of unidentified human genes. XIV. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 6: 197-205.
3. Brymora, A., et al. 2001. The brain exocyst complex interacts with Ral A in a GTP-dependent manner: identification of a novel mammalian Sec3 gene and a second Sec15 gene. J. Biol. Chem. 276: 29792-29797.
4. Moskalenko, S., et al. 2003. Ral GTPases regulate exocyst assembly through dual subunit interactions. J. Biol. Chem. 278: 51743-51748.
5. Sans, N., et al. 2003. NMDA receptor trafficking through an interaction between PDZ proteins and the exocyst complex. Nat. Cell Biol. 5: 520-530.
6. Inoue, M., et al. 2003. The exocyst complex is required for targeting of Glut4 to the plasma membrane by Insulin. Nature 422: 629-633.
7. Wang, S., et al. 2004. The mammalian exocyst, a complex required for exocytosis, inhibits tubulin polymerization. J. Biol. Chem. 279: 35958-35966.

CHROMOSOMAL LOCATION

Genetic locus: EXOC7 (human) mapping to 17q25.1; Exoc7 (mouse) mapping to 11 E2.

SOURCE

Exo70 (H-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 600-616 within an internal region of Exo70 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514257 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Exo70 (H-9) is recommended for detection of Exo70 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 Exo70 siRNA (h): sc-94143, Exo70 siRNA (m): sc-144969, Exo70 shRNA Plasmid (h): sc-94143-SH, Exo70 shRNA Plasmid (m): sc-144969-SH, Exo70 shRNA (h) Lentiviral Particles: sc-94143-V and Exo70 shRNA (m) Lentiviral Particles: sc-144969-V.

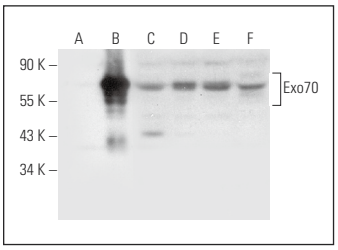
Molecular Weight of Exo70: 70 kDa.

Positive Controls: Exo70 (m): 293T Lysate: sc-125314, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Exo70 (H-9): sc-514257. Western blot analysis of Exo70 expression in non-transfected 293T: sc-117752 (**A**), mouse Exo70 transfected 293T: sc-125314 (**B**), HeLa (**C**), Jurkat (**D**), MOLT-4 (**E**) and Hep G2 (**F**) whole cell lysates.

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 for detailed protocols and support products.