SANTA CRUZ BIOTECHNOLOGY, INC.

ERGIC-3 (B-5): sc-398778

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cycling proteins play important roles in the organization and function of the early secretory pathway by participating in membrane traffic and selective transport of cargo between the endoplasmic reticulum (ER), the intermediate compartment (ERGIC) and the Golgi. A family of membrane bound, ubiquitous proteins involved in the selective transport of newly synthesized glycoproteins from the ER to the ERGIC include VIP36, ERGIC-53, ERGIC-1, ERGIC-2 and ERGIC-3. ERGIC-1, also designated ERGIC32, is thought to modulate the activity of a complex formed by ERGIC-2 (also designated Erv41) and ERGIC-3 (also designated Erv46). ERGIC-2 and ERGIC-3 are both mammalian homologs of yeast proteins abundant in COPII-coated vesicles and localize to the *cis*-face of the Golgi apparatus.

REFERENCES

1. Hauri, H.P., et al. 2000. ERGIC-53 and traffic in the secretory pathway. J. Cell Sci. 113: 587-596.
2. Hauri, H.P., et al. 2002. Lectins and protein traffic early in the secretory pathway. Biochem. Soc. Symp. 69: 73-82.
3. Orci, L., et al. 2003. Mammalian Erv46 localizes to the endoplasmic reticulum-Golgi intermediate compartment and to *cis*-Golgi cisternae. Proc. Natl. Acad. Sci. USA 100: 4586-4591.
4. Breuza, L., et al. 2004. Proteomics of endoplasmic reticulum-Golgi intermediate compartment (ERGIC) membranes from brefeldin A-treated Hep G2 cells identifies ERGIC-32, a new cycling protein that interacts with human Erv46. J. Biol. Chem. 279: 47242-47253.
5. Kamiya, Y., et al. 2005. Sugar-binding properties of VIP36, an intracellular animal lectin operating as a cargo receptor. J. Biol. Chem. 280: 37178-37182.

CHROMOSOMAL LOCATION

Genetic locus: ERGIC3 (human) mapping to 20q11.22; Ergic3 (mouse) mapping to 2 H1.

SOURCE

ERGIC-3 (B-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 171-194 within an internal region of ERGIC-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} 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-398778 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

ERGIC-3 (B-5) is recommended for detection of ERGIC-3 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 ERGIC-3 siRNA (h): sc-77283, ERGIC-3 siRNA (m): sc-144929, ERGIC-3 shRNA Plasmid (h): sc-77283-SH, ERGIC-3 shRNA Plasmid (m): sc-144929-SH, ERGIC-3 shRNA (h) Lentiviral Particles: sc-77283-V and ERGIC-3 shRNA (m) Lentiviral Particles: sc-144929-V.

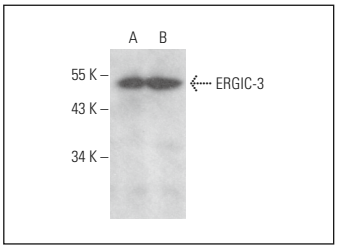
Molecular Weight of ERGIC-3: 43/26/44 kDa.

Positive Controls: ERGIC-3 (m): 293T Lysate: sc-126805, MCF7 whole cell lysate: sc-2206 or K-562 whole cell lysate: sc-2203.

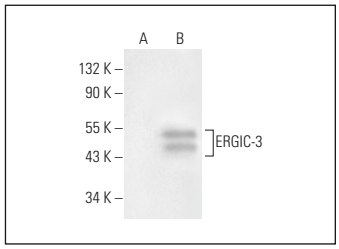
RECOMMENDED SUPPORT REAGENTS

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



ERGIC-3 (B-5): sc-398778. Western blot analysis of ERGIC-3 expression in MCF7 (**A**) and K-562 (**B**) whole cell lysates.



ERGIC-3 (B-5): sc-398778. Western blot analysis of ERGIC-3 expression in non-transfected: sc-117752 (**A**) and mouse ERGIC-3 transfected: sc-126805 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Tsai, S.J., et al. 2021. Exosome-mediated mRNA delivery *in vivo* is safe and can be used to induce SARS-CoV-2 immunity. J. Biol. Chem. 297: 101266.

RESEARCH USE

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