SANTA CRUZ BIOTECHNOLOGY, INC.

ERGIC-3 (E-3): sc-514611

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 (E-3) is a mouse monoclonal antibody raised against amino acids 71-130 mapping within an internal region of ERGIC-3 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.

ERGIC-3 (E-3) is available conjugated to agarose (sc-514611 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514611 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514611 PE), fluorescein (sc-514611 FITC), Alexa Fluor® 488 (sc-514611 AF488), Alexa Fluor® 546 (sc-514611 AF546), Alexa Fluor® 594 (sc-514611 AF594) or Alexa Fluor® 647 (sc-514611 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514611 AF680) or Alexa Fluor® 790 (sc-514611 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ERGIC-3 (E-3) 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.

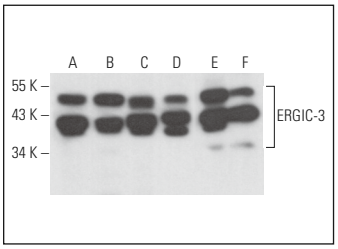
Molecular Weight of ERGIC-3 isoform 1/2/3: 43/26/44 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, PC-3 cell lysate: sc-2220 or Hep G2 cell lysate: sc-2227.

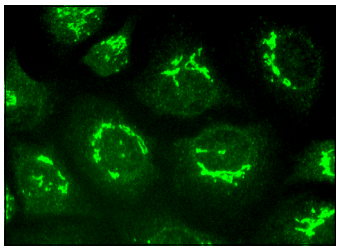
RECOMMENDED SUPPORT REAGENTS

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 (E-3): sc-514611. Western blot analysis of ERGIC-3 expression in Hep G2 (**A**), Caki-1 (**B**), PC-3 (**C**), 3T3-L1 (**D**) and KNRK (**E**) whole cell lysates and rat testis tissue extract (**F**).



ERGIC-3 (E-3): sc-514611. Immunofluorescence staining of methanol-fixed HeLa cells showing Golgi apparatus localization.

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.