# ERGIC-2 (Y-22): sc-133557



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., Kappeler, F., Andersson, H. and Appenzeller, C. 2000. ERGIC-53 and traffic in the secretory pathway. J. Cell Sci. 113: 587-596.
- Hauri, H.P., Nufer, O., Breuza, L., Tekaya, H.B. and Liang, L. 2002. Lectins and protein traffic early in the secretory pathway. Biochem. Soc. Symp. 73-82.
- Orci, L., Ravazzola, M., Mack, G.J., Barlowe, C. and Otte, S. 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., Halbeisen, R., Jenö, P., Otte, S., Barlowe, C., Hong, W. and Hauri, H.P. 2004. Proteomics of endoplasmic reticulum-Golgi intermediate compartment (ERGIC) membranes from brefeldin A-treated HepG2 cells identifies ERGIC-32, a new cycling protein that interacts with human Erv46. J. Biol. Chem. 279: 47242-47253.
- Kamiya, Y., Yamaguchi, Y., Takahashi, N., Arata, Y., Kasai, K., Ihara, Y., Matsuo, I., Ito, Y., Yamamoto, K. and Kato, K. 2005. Sugar-binding properties of VIP36, an intracellular animal lectin operating as a cargo receptor. J. Biol. Chem. 280: 37178-37182.
- Appenzeller-Herzog, C. and Hauri, H.P. 2006. The ER-Golgi intermediate compartment (ERGIC): in search of its identity and function. J. Cell Sci. 119: 2173-2183.

# CHROMOSOMAL LOCATION

Genetic locus: ERGIC2 (human) mapping to 12p11.22.

# **SOURCE**

ERGIC-2 (Y-22) is a Protein A purified rabbit polyclonal antibody raised against synthetic ERGIC-2 peptide of human origin.

## **PRODUCT**

Each vial contains 100  $\mu g$  lgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

# **RESEARCH USE**

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

### **APPLICATIONS**

ERGIC-2 (Y-22) is recommended for detection of ERGIC-2 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000)

Suitable for use as control antibody for ERGIC-2 siRNA (h): sc-96220, ERGIC-2 shRNA Plasmid (h): sc-96220-SH and ERGIC-2 shRNA (h) Lentiviral Particles: sc-96220-V.

Molecular Weight (predicted) of ERGIC-2: 43 kDa.

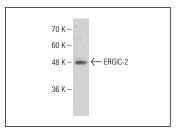
Molecular Weight (observed) of ERGIC-2: 48 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

#### **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



ERGIC-2 (Y-22): sc-133557. Western blot analysis of ERGIC-2 expression in Hep G2 whole cell lysate.

### **STORAGE**

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

# **PROTOCOLS**

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