SANTA CRUZ BIOTECHNOLOGY, INC.

ERGIC-53 (G-11): sc-398685

BACKGROUND

Lectin mannose-binding 1, also designated vesicular integral-membrane protein (VIP36) and lectin mannose-binding 2, also designated ER-Golgi intermediate compartment (ERGIC-53) comprise a family of membrane bound, ubiquitous proteins involved in the selective transport of newly synthesized glycoproteins from the endoplasmic reticulum (ER) to the ER-Golgi intermediate compartment (ERGIC). VIP36 acts as an intracellular lectin in the early secretory pathway. It is involved in the sorting and transport of glycoproteins carrying high mannose-type glycans. ERGIC-53, a mannose-specific lectin, recognizes sugar residues of glycoproteins and glycolipids. It mediates the sorting and recycling of proteins and/or lipids. Null expression of ERGIC-53, also designated LMAN1, results in a rare autosomal recessive bleeding disorder that causes combined deficiency of both coagulation factors V and VIII.

REFERENCES

1. Schindler, R., et al. 1993. ERGIC-53, a membrane protein of the ER-Golgi intermediate compartment, carries an ER retention motif. Eur. J. Cell Biol. 61: 1-9.
2. Kappeler, F., et al. 1994. A dual role for COOH-terminal lysine residues in pre-Golgi retention and endocytosis of ERGIC-53. J. Biol. Chem. 269: 6279-6281.
3. Hauri, H.P., et al. 2002. Lectins and protein traffic early in the secretory pathway. Biochem. Soc. Symp. 69: 73-82.
4. Cunningham, M.A., et al. 2003. LMAN1 is a molecular chaperone for the secretion of coagulation Factor VIII. J. Thromb. Haemost. 1: 2360-2367.
5. Hara-Kuge, S., et al. 2004. The binding of VIP36 and α-Amylase in the secretory vesicles via high-mannose type glycans. Glycobiology 14: 739-744.
6. 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: LMAN1 (human) mapping to 18q21.32; Lman1 (mouse) mapping to 18 E1.

SOURCE

ERGIC-53 (G-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 68-96 near the N-terminus of ERGIC-53 of human origin.

PRODUCT

Each vial contains 200 µg IgM 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-398685 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-53 (G-11) is recommended for detection of ERGIC-53 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-53 siRNA (h): sc-45246, ERGIC-53 siRNA (m): sc-45247, ERGIC-53 shRNA Plasmid (h): sc-45246-SH, ERGIC-53 shRNA Plasmid (m): sc-45247-SH, ERGIC-53 shRNA (h) Lentiviral Particles: sc-45246-V and ERGIC-53 shRNA (m) Lentiviral Particles: sc-45247-V.

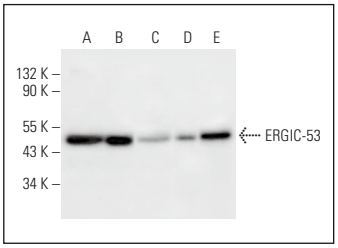
Molecular Weight of ERGIC-53: 53 kDa.

Positive Controls: ERGIC-53 (h): 293T Lysate: sc-114897, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

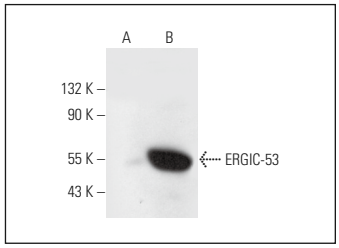
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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-53 (G-11): sc-398685. Western blot analysis of ERGIC-53 expression in HeLa (**A**), Hep G2 (**B**), A549 (**C**), Jurkat (**D**) and JAR (**E**) whole cell lysates.



ERGIC-53 (G-11): sc-398685. Western blot analysis of ERGIC-53 expression in non-transfected: sc-117752 (**A**) and human ERGIC-53 transfected: sc-114897 (**B**) 293T whole cell lysates.

RESEARCH USE

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

CONJUGATES

See **ERGIC-53 (F-3): sc-398777** for ERGIC-53 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.