

ERGIC-53 (T-20): sc-32443

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

- 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.
- 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.
- Hauri, H.P., et al. 2002. Lectins and protein traffic early in the secretory pathway. *Biochem. Soc. Symp.*: 73-82.
- Cunningham, M.A., et al. 2003. LMAN1 is a molecular chaperone for the secretion of coagulation factor VIII. *J. Thromb. Haemost.* 1: 2360-2367.
- 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.
- 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.
- Neve, EP. et al. 2005. Oligomerization and interacellular localization of the glycoprotein receptor ERGIC-53 is independent of disulfide bonds. *J. Mol. Biol.* 354: 556-568.

CHROMOSOMAL LOCATION

Genetic locus: LMAN1 (human) mapping to 18q21.32; Lman1 (mouse) mapping to 18 E1.

SOURCE

ERGIC-53 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ERGIC-53 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32443 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ERGIC-53 (T-20) is recommended for detection of ERGIC-53 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

ERGIC-53 (T-20) is also recommended for detection of ERGIC-53 in additional species, including equine, canine, bovine, porcine and avian.

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.

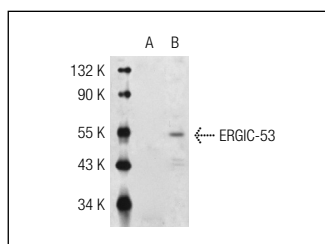
Molecular Weight of ERGIC-53: 53 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ERGIC-53 (T-20): sc-32443. 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.

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.