SANTA CRUZ BIOTECHNOLOGY, INC.

ERGIC-53 (C-6): sc-365158

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

ERGIC-53 (C-6) is a mouse monoclonal antibody raised against amino acids 266-510 mapping at the C-terminus of ERGIC-53 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-53 (C-6) is available conjugated to agarose (sc-365158 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365158 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365158 PE), fluorescein (sc-365158 FITC), Alexa Fluor® 488 (sc-365158 AF488), Alexa Fluor® 546 (sc-365158 AF546), Alexa Fluor® 594 (sc-365158 AF594) or Alexa Fluor® 647 (sc-365158 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365158 AF680) or Alexa Fluor® 790 (sc-365158 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ERGIC-53 (C-6) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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.

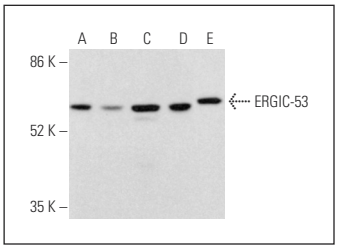
Molecular Weight of ERGIC-53: 53 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, JAR cell lysate: sc-2276 or HeLa whole cell lysate: sc-2200.

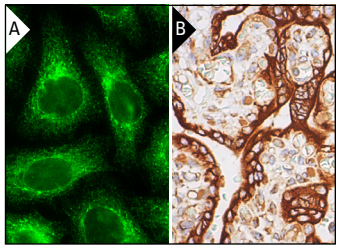
STORAGE

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

DATA



ERGIC-53 (C-6): sc-365158. Western blot analysis of ERGIC-53 expression in Hep G2 (**A**), A549 (**B**), Jurkat (**C**), JAR (**D**) and HeLa (**E**) whole cell lysates.



ERGIC-53 (C-6): sc-365158. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells (**B**).

SELECT PRODUCT CITATIONS

1. Adolf, F., et al. 2013. Scission of COPI and COPII vesicles is independent of GTP hydrolysis. Traffic 14: 922-932.
2. Mak, A.B., et al. 2014. Post-translational regulation of CD133 by ATase1/ ATase2-mediated lysine acetylation. J. Mol. Biol. 426: 2175-2182.
3. Gee, H.Y., et al. 2015. Analysis of conventional and unconventional trafficking of CFTR and other membrane proteins. Methods Mol. Biol. 1270: 137-154.
4. Tábara, L.C. and Escalante, R. 2016. VMP1 establishes ER-microdomains that regulate membrane contact sites and autophagy. PLoS ONE 11: e0166499.
5. Ramasamy, K., et al. 2018. *Mycoplasma pneumoniae* community-acquired respiratory distress syndrome toxin uses a novel KELED sequence for retrograde transport and subsequent cytotoxicity. MBio 9: e01663-17.
6. Adolf, F., et al. 2019. Proteomic profiling of mammalian COPII and COPI vesicles. Cell Rep. 26: 250-265.e5.
7. Kumar, S., et al. 2019. Phosphorylation of Syntaxin 17 by TBK1 controls autophagy initiation. Dev. Cell 49: 130-144.e6.
8. Cousin, M.A., et al. 2019. RINT1 bi-allelic variations cause infantile-onset recurrent acute liver failure and skeletal abnormalities. Am. J. Hum. Genet. 105: 108-121.
9. Zeyen, L., et al. 2020. Hepatitis B subviral envelope particles use the COPII machinery for intracellular transport via selective exploitation of Sec24A and Sec23B. Cell. Microbiol. 22: e13181.
10. Guo, R., et al. 2021. A swine arterivirus deubiquitinase stabilizes two major envelope proteins and promotes production of viral progeny. PLoS Pathog. 17: e1009403.

RESEARCH USE

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