SANTA CRUZ BIOTECHNOLOGY, INC.

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



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 μ g/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365158 HRP), 200 μ g/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 μ g/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 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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, parafin-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. Gee, H.Y., et al. 2015. Analysis of conventional and unconventional trafficking of CFTR and other membrane proteins. Methods Mol. Biol. 1270: 137-154.
- Adolf, F., et al. 2016. Sec24C/D-isoform-specific sorting of the preassembled ER-Golgi Q-SNARE complex. Mol. Biol. Cell 27: 2697-2707.
- 4. Li, J., et al. 2017. Transiently expressed ATG16L1 inhibits autophagosome biogenesis and aberrantly targets RAB11-positive recycling endosomes. Autophagy 13: 345-358.
- 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.
- Adolf, F., et al. 2019. Proteomic profiling of mammalian COPI and COPI vesicles. Cell Rep. 26: 250-265.e5.
- 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.
- Ghosh, M., et al. 2021. Mutant p53 suppresses innate immune signaling to promote tumorigenesis. Cancer Cell 39: 494-508.e5.
- Du, Q., et al. 2022. Bioinformatics analysis of LMAN1 expression, clinical characteristics, and its effects on cell proliferation and invasion in glioma. Brain Res. 1789: 147952.
- Bian, W., et al. 2023. A spatially defined human Notch receptor interaction network reveals Notch intracellular storage and Ataxin-2-mediated fast recycling. Cell Rep. 42: 112819.

RESEARCH USE

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