SANTA CRUZ BIOTECHNOLOGY, INC.

MLN64 (H-1): sc-166215

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Sterol transport is mediated by vesicles or by soluble protein carriers, such as steroidogenic acute regulatory protein (StAR). StAR is homologous to a family of proteins containing a 200-210 amino acid StAR-related lipid transfer (StART) domain, including StARD3 (also known as MLN64). Amplification of the gene which encodes MLN64 results in overexpression and coamplification with ErbB-2 in breast cancer cell lines. Immunoblot analysis shows expression in most breast cancer cell lines and tissues, as well as in an ovary carcinoma cell line. Immunofluorescence microscopy and mutation analysis shows cytoplasmic expression in condensation sites and perinuclear condensation in breast cancer biopsies. It is suggested that MLN64 acts on late endosome cholesterol traffic, possibly lowering cholesterol by shuttling it to a cytoplasmic receptor site.

REFERENCES

1. Tomasetto, C., et al. 1995. Identification of four novel human genes amplified and overexpressed in breast carcinoma and localized to the q11-q21.3 region of chromosome 17. Genomics 28: 367-376.
2. Moog-Lutz, C., et al. 1997. MLN64 exhibits homology with the steroidogenic acute regulatory protein (StAR) and is over-expressed in human breast carcinomas. Int. J. Cancer 71: 183-191.

CHROMOSOMAL LOCATION

Genetic locus: STARD3 (human) mapping to 17q12; Stard3 (mouse) mapping to 11 D.

SOURCE

MLN64 (H-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 351-385 within an internal region of MLN64 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.

MLN64 (H-1) is available conjugated to agarose (sc-166215 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-166215 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166215 PE), fluorescein (sc-166215 FITC), Alexa Fluor® 488 (sc-166215 AF488), Alexa Fluor® 546 (sc-166215 AF546), Alexa Fluor® 594 (sc-166215 AF594) or Alexa Fluor® 647 (sc-166215 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166215 AF680) or Alexa Fluor® 790 (sc-166215 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166215 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

MLN64 (H-1) is recommended for detection of MLN64 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 MLN64 siRNA (h): sc-44439, MLN64 siRNA (m): sc-149470, MLN64 shRNA Plasmid (h): sc-44439-SH, MLN64 shRNA Plasmid (m): sc-149470-SH, MLN64 shRNA (h) Lentiviral Particles: sc-44439-V and MLN64 shRNA (m) Lentiviral Particles: sc-149470-V.

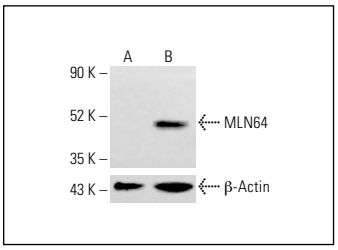
Molecular Weight of MLN64: 50 kDa.

Positive Controls: MLN64 (h): 293T Lysate: sc-114079 or chemically-treated K-562 whole cell lysate.

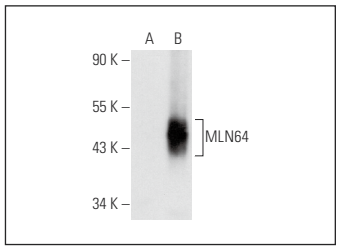
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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



MLN64 (H-1): sc-166215. Western blot analysis of MLN64 expression in untreated (**A**) and chemically-treated (**B**) K-562 whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408. β-Actin (C4): sc-47778 used as loading control. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



MLN64 (H-1): sc-166215. Western blot analysis of MLN64 expression in non-transfected: sc-117752 (**A**) and human MLN64 transfected: sc-114079 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Deng, L., et al. 2022. Macrophages take up VLDL-sized emulsion particles through caveolae-mediated endocytosis and excrete part of the internalized triglycerides as fatty acids. PLoS Biol. 20: e3001516.

RESEARCH USE

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