SANTA CRUZ BIOTECHNOLOGY, INC.

MLN64 (h): 293T Lysate: sc-114079

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

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4. Alpy, F., et al. 2001. The steroidogenic acute regulatory protein homolog MLN64, a late endosomal cholesterol-binding protein. J. Biol. Chem. 276: 4261-4269.
5. Soccio, R.E., et al. 2002. The cholesterol-regulated StARD4 gene encodes a StAR-related lipid transfer protein with two closely related homologues, StARD5 and StARD6. Proc. Natl. Acad. Sci. USA 99: 6943-6948.
6. Alpy, F., et al. 2003. Metastatic lymph node 64 (MLN64), a gene overexpressed in breast cancers, is regulated by Sp/KLF transcription factors. Oncogene 22: 3770-3780.
7. Ren, S., et al. 2004. Effect of increasing the expression of cholesterol transporters (StAR, MLN64, and SCP-2) on bile acid synthesis. J. Lipid Res. 45: 2123-2131.
8. Kishida, T., et al. 2004. Targeted mutation of the MLN64 StART domain causes only modest alterations in cellular sterol metabolism. J. Biol. Chem. 279: 19276-19285.
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CHROMOSOMAL LOCATION

Genetic locus: STARD3 (human) mapping to 17q12.

PRODUCT

MLN64 (h): 293T Lysate represents a lysate of human MLN64 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

MLN64 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive MLN64 antibodies. Recommended use: 10-20 µl per lane.

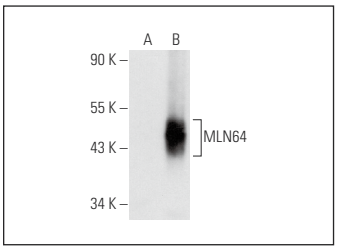
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-tranfected 293T cells.

MLN64 Antibody (H-1): sc-166215 is recommended as a positive control antibody for Western Blot analysis of enhanced human MLN64 expression in MLN64 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

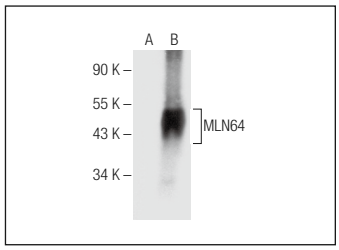
RECOMMENDED SUPPORT REAGENTS

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.

DATA



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.



MLN64 (G-3): sc-390040. Western blot analysis of MLN64 expression in non-transfected: sc-117752 (**A**) and human MLN64 transfected: sc-114079 (**B**) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.