

# MLN64 (D-20): sc-26062

## 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- to 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

- 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.
- 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.
- Watari, H., et al. 1997. MLN64 contains a domain with homology to the steroidogenic acute regulatory protein (StAR) that stimulates steroidogenesis. *Proc. Nat. Acad. Sci. USA* 94: 8462-8467.
- Alpy, F., et al. 2001. The steroidogenic acute regulatory protein homolog MLN64, a late endosomal cholesterol-binding protein. *J. Biol. Chem.* 276: 4261-4269.
- 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. Nat. Acad. Sci. USA* 99: 6943-6948.

## CHROMOSOMAL LOCATION

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

## SOURCE

MLN64 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MLN64 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-26062 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

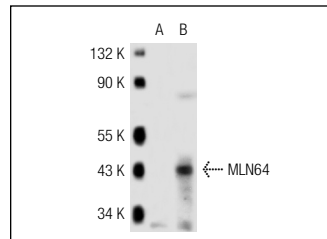
MLN64 (D-20) is recommended for detection of MLN64 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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.

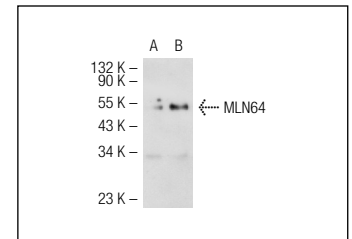
Molecular Weight of MLN64: 50 kDa.

Positive Controls: MLN64 (h): 293T Lysate: sc-114079 or MLN64 (m): 293T Lysate: sc-125623.

## DATA



MLN64 (D-20): sc-26062. Western blot analysis of MLN64 expression in non-transfected: sc-117752 (A) and human MLN64 transfected: sc-114079 (B) 293T whole cell lysates.



MLN64 (D-20): sc-26062. Western blot analysis of MLN64 expression in non-transfected: sc-117752 (A) and mouse MLN64 transfected: sc-125623 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Cai, W., et al. 2010. Expression of MLN64 influences cellular matrix adhesion of breast cancer cells, the role for focal adhesion kinase. *Int. J. Mol. Med.* 25: 573-580.
- Olvera-Sanchez, S., et al. 2011. Mitochondrial heat shock protein participates in placental steroidogenesis. *Placenta* 32: 222-229.
- Wu, L., et al. 2012. Abnormal regulation for progesterone production in placenta with prenatal cocaine exposure in rats. *Placenta* 33: 977-981.

## RESEARCH USE

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


 MONOS  
Satisfaction  
Guaranteed

Try **MLN64 (H-1): sc-166215** or **MLN64 (G-3): sc-390040**, our highly recommended monoclonal alternatives to MLN64 (D-20).