SANTA CRUZ BIOTECHNOLOGY, INC.

# LRP (h): 293T Lysate: sc-170301

## BACKGROUND

Tumor cells that are insensitive to anticancer drugs often have a multidrug-resistant (MDR) phenotype. Proteins associated with this phenomenon are transport-associated proteins such as P-glycoprotein, multidrug resistance protein 1, lung resistance-related protein (LRP) and breast cancer resistance protein (BCRP). The LRP protein, which is identified as the major vault protein (MVP), is overexpressed in various multidrug-resistant cancer cell lines and clinical samples. The promoter of LRP is TATA-less; contains an inverted CCAAT-box and a Sp1 site located near a p53 binding motif. LRP has two alternative splice variants, which differ from each other within the 5'-leader. The long-LRP isoform is ubiquitously expressed and represents an almost constant portion of the total LRP mRNA in many different normal tissues. LRP is the major component of the multimeric ribonucleoprotein complexes, with several copies of an untranslated RNA, which has been shown to transport along cytoskeletal-based cellular tracks. In conclusion, LRP protein mediates drug resistance, perhaps via a transport process.

## REFERENCES


1. Scheffer, G.L., et al. 1995. The drug resistance-related protein LRP is the human major vault protein. Nat. Med. 1: 578-582.
2. Herrmann, C., et al. 1999. Recombinant major vault protein is targeted to neuritic tips of PC12 cells. J. Cell Biol. 144: 1163-1172.
3. Scheffer, G.L., et al. 2000. Lung resistance-related protein/major vault protein and vaults in multidrug-resistant cancer. Curr. Opin. Oncol. 12: 550-556.
4. Lange, C., et al. 2000. Cloning and initial analysis of the human multidrug resistance-related MVP/LRP gene promoter. Biochem. Biophys. Res. Commun. 278: 125-133.
5. Takebayashi Y., et al. 2001. Expression of multidrug resistance associated transporters (Mdr-1, MRP1, LRP and BCRP) in porcine oocyte. Int. J. Mol. Med. 7: 397-400.
6. Holzmann K., et al. 2001. A small upstream open reading frame causes inhibition of human major vault protein expression from a ubiquitous mRNA splice variant. FEBS Lett. 494: 99-104.


## CHROMOSOMAL LOCATION

Genetic locus: MVP (human) mapping to 16p11.2.

## PRODUCT

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

## 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.

## PROTOCOLS

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

## APPLICATIONS

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

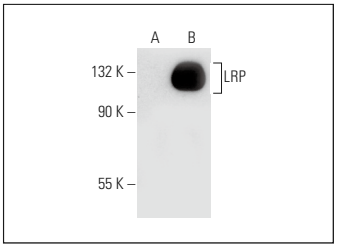
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

LRP (1014): sc-23916 is recommended as a positive control antibody for Western Blot analysis of enhanced human LRP expression in LRP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

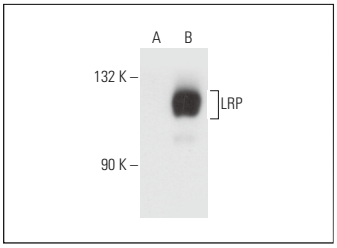
## RECOMMENDED SUPPORT REAGENTS

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




LRP (1014): sc-23916. Western blot analysis of LRP expression in non-transfected: sc-117752 (**A**) and human LRP transfected: sc-170301 (**B**) 293T whole cell lysates.




LRP (MVP-37): sc-57526. Western blot analysis of LRP expression in non-transfected: sc-117752 (**A**) and human LRP transfected: sc-170301 (**B**) 293T whole cell lysates.

## RESEARCH USE

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