

AM32049SU-N**Monoclonal Antibody to Major Vault Protein - Liquid****Alternate names:**

LRP, Lung-Resistance Related Protein, MVP

Quantity:

1 ml

Concentration:

~0.25 mg Ig/ml

Background:

MVP is identical to lung-resistance related protein (LRP). Vaults are large ribonucleoprotein particles (RNPs) present in all eukaryotic cells. They have a complex morphology, including several small molecules of RNA, but a single protein species. The MVP accounts for >70% of their mass. Their shape is reminiscent of the nucleopore central plug. Amino acid 241-280 of human estrogen receptor (ER), (site of nuclear localization signal sequence), is mapped to be the site of interaction between ER and MVP. Treatment of cells with estradiol increases the amount of MVP in nuclear extract. Anti-estrogen 1C1182 shows no effect. The hormone-dependent interaction of vaults with ER is prevented in vitro by sodium molybdate. Antibodies to progesterone and glucocorticoid receptors are also able to co-immunoprecipitate the MVP. LRP is a protein overexpressed in many neoplastic tissues and cell lines. Expression of LRP predicts a poor response to chemotherapy.

This 104-kD protein is the major vault protein (MVP) also described as the lung resistance protein (LRP) and has shown to interact with the estrogen receptor. The protein is part of a very large vault ribonucleoprotein complex present in all eukaryotic cells and its structure and protein composition is highly conserved. Because of the size, shape, and protein and RNA composition of this complex the particles are different from other ribonucleoproteins.

Uniprot ID:[Q14764](#)**NCBI:**[NP_005106.2](#)**GeneID:**[9961](#)**Host / Isotype:**

Rat / IgG

Clone:

LMR5

Format:**State:** Liquid**Preservatives:** 0.09% Sodium Azide**Stabilizers:** 1% BSA**Applications:****Flow Cytometry** (Cell permeabilization required).**Immunohistochemistry on Frozen Sections, Air-Dried or Acetone Fixed Cells:** 1/20.**Immunohistochemistry on Paraffin Embedded Sections.**This antibody *LMR5* has potential value for detection of LRP/MVP-associated non-Pgp MDR in Human tumor samples.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:This Monoclonal antibody *LMR5* reacts with an internal epitope of the LRP/Major Vault Protein (P110), which is strongly overexpressed in various Human non-P-glycoprotein MDR tumor cell lines.

Species Reactivity:	Tested: Human.
Add. Information:	Mab producing cells: The hybridoma cell line was obtained by fusion of lymph node cells from an immunized mouse (Balb/c) with SP2/O mouse myeloma cells. Culture Medium: RPMI-1640 (Gibco, Paisley, Scotland UK), supplemented with Nutridoma-SR (Boehringer, Indianapolis, USA). The medium does not contain serum nor added enzymes. The antibody solution has been filtered through a 0.22 micron filter. NOTE: This monoclonal antibody has been produced in a clinical laboratory in which no animal viruses are being studied or cultured.
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing. Shelf life: one year from despatch.
General Readings:	<ol style="list-style-type: none">1. Scheper RJ, Broxterman HJ, Scheffer GL, Kaaijk P, Dalton WS, van Heijningen TH, et al. Overexpression of a M(r) 110,000 vesicular protein in non-P-glycoprotein-mediated multidrug resistance. <i>Cancer Res.</i> 1993 Apr 1;53(7):1475-9. PubMed PMID: 7680954.2. Scheffer GL, Wijngaard PL, Flens MJ, Izquierdo MA, Slovak ML, Pinedo HM, et al. The drug resistance-related protein LRP is the human major vault protein. <i>Nat Med.</i> 1995 Jun;1(6):578-82. PubMed PMID: 7585126.3. Izquierdo MA, van der Zee AG, Vermorken JB, van der Valk P, Beliën JA, Giaccone G, et al. Drug resistance-associated marker Lrp for prediction of response to chemotherapy and prognoses in advanced ovarian carcinoma. <i>J Natl Cancer Inst.</i> 1995 Aug 16;87(16):1230-7. PubMed PMID: 7563169.4. Flens MJ, Scheffer GL, van der Valk P, Broxterman HJ, Eijdemans EW, Huysmans AC, et al. Identification of novel drug resistance-associated proteins by a panel of rat monoclonal antibodies. <i>Int J Cancer.</i> 1997 Oct 9;73(2):249-57. PubMed PMID: 9335451.5. Schroeijs AB, Scheffer GL, Flens MJ, Meijer GA, Izquierdo MA, van der Valk P, et al. Immunohistochemical detection of the human major vault protein LRP with two monoclonal antibodies in formalin-fixed, paraffin-embedded tissues. <i>Am J Pathol.</i> 1998 Feb;152(2):373-8. PubMed PMID: 9466563.