

AM32033PU-N**Monoclonal Antibody to Major Vault Protein - Purified**

Alternate names:	LRP, Lung-Resistance Related Protein, MVP
Quantity:	0.1 mg
Concentration:	0.1 mg/ml
Background:	<p>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.</p> <p>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.</p>
Uniprot ID:	Q14764
NCBI:	NP_005106.2
GeneID:	9961
Host / Isotype:	Mouse / IgG1
Recommended Isotype Controls:	SM10P (for use in human samples), AM03095PU-N
Clone:	1014
Immunogen:	A BALB/c mouse was immunized with 5 µg of affinity purified nuclear extract proteins. Spleen cells were fused with equal number of Sp0Ag-14 myeloma cells.
Format:	State: Liquid purified Ig fraction Buffer System: PBS Preservatives: 0.05% Sodium Azide
Applications:	Suitable for Western blotting and Immunohistochemistry on Frozen Sections . The mAb 1014 can be applied for the detection of MVP/LRP in a large number of eukaryotic cells including the MCF-7 and Hela tumor cell lines. The mAb is especially applicable to study the association of Estrogen Receptor with vaults and the study of the mechanism of action of Estrogenic hormones.

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

Specificity:

This Monoclonal antibody *clone 1014* is specific for a 104-kD protein. This mAb is one of four mAb which recognize different epitopes of the protein. Cells whose supernatant showed a positive signal for a 104-kD band were selected and cloned by limited dilution.

Species Reactivity:

Tested: Human.

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:

1. Abbondanza C, Rossi V, Roscigno A, Gallo L, Belsito A, Piluso G, et al. Interaction of vault particles with estrogen receptor in the MCF-7 breast cancer cell. *J Cell Biol.* 1998 Jun 15;141(6):1301-10. PubMed PMID: 9628887.

2. den Boer ML, Pieters R, Kazemier KM, Rottier MM, Zwaan CM, Kaspers GJ, et al. Relationship between major vault protein/lung resistance protein, multidrug resistance-associated protein, P-glycoprotein expression, and drug resistance in childhood leukemia. *Blood.* 1998 Mar 15;91(6):2092-8. PubMed PMID: 9490695.