**Product Information**

**MONOCLONAL ANTI-LRP/MVP**

**CLONE 1032**

Purified Mouse Immunoglobulin

**Product Number** L 8289

**Product Description**
Monoclonal Anti-LRP/MVP (Lung-Resistance Related Protein/Major Vault Protein) (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of mouse splenocytes and mouse myeloma Sp2/0-Ag14 cells. The mice were immunized with a protein immunoprecipitated from the effluent of a phosphocellulose column loaded with the extract of human breast cancer MCF-7 cells. The antibody is purified by protein G chromatography.

Monoclonal Anti-LRP/MVP recognizes human and rat major vault protein (104–110 kDa), which is identical to lung-resistance related protein. It has been used in immunoblotting, immunohistochemistry with frozen or formalin-fixed paraffin-embedded tissue sections, immunoprecipitation, flow cytometry and gel shift.

Major vault protein (MVP) is the predominant member of a large cytosolic ribonucleoprotein particle (RPN) termed vault, accounting for over 70% of the vault’s mass. Vaults are multi-subunit structures present in all eukaryotic cells and may be involved in nucleocytoplasmic transport. The shape of vault is similar to that of the nucleopore central plug.

Immunoblot analysis of vaults purified on sucrose gradients shows the presence of estrogen receptor co-migrating with the vault peak. The hormone-dependent interaction of vaults with the estrogen receptor is reproducible in vitro and is prevented by sodium molybdate. Antibodies to progesterone and glucocorticoid receptors are able to co-immunoprecipitate the major vault protein. The interaction of vaults and nuclear receptors may be related to the intracellular traffic of the receptors. Phosphorylation of MVP depends on the presence of Mg²⁺ and can be inhibited by the chelating agent EDTA. The results suggest that cell-specific phosphorylation of MVP may play a critical role in vault function.

Multidrug-resistant (MDR) cancer cells frequently overexpress the 110 kDa lung resistance-related protein (LRP/MVP). Overexpression of LRP often predicts a poor response to chemotherapy. By screening a multidrug-resistant non-P-glycoprotein, LRP was isolated and the sequence analysis predicted that the deduced 896-amino acid LRP protein shares 88% amino acid identity with the rat major vault protein (MVP). RNase protection assays showed that LRP expression is enhanced 4 to 8-fold in non-P-glycoprotein MDR cell lines.

Monoclonal antibodies (MAbs) against LRP/MVP play a critical role in determining the relevance of this protein in drug resistance.

**Reagent**
Monoclonal Anti-LRP/MVP is supplied as a solution in phosphate buffered saline, pH 7.4, with 0.08% sodium azide as a preservative.

**Precautions and Disclaimer**
Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

**Storage/Stability**
Store at −20 °C. Upon initial thawing freeze the solution in working aliquots for extended storage. Avoid repeated freezing and thawing to prevent denaturing the antibody. Do not store in a frost-free freezer. The antibody is stable for at least 12 months when stored appropriately. Working dilutions should be discarded if not used within 12 hours.

**Product Profile**
A recommended working concentration of 2 to 4 µg/ml is determined by immunohistochemistry using Anti-LRP/MVP on formalin-fixed, paraffin-embedded human breast carcinoma tissue. For immunoblotting the recommended working concentration is 1 µg/ml. For gel supershift, flow cytometry and immunoprecipitation, the recommended working concentration is 2 µg/ml.

Note: In order to obtain best results using different techniques and preparations we recommend determining optimal working concentration by titration.
References