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ProductInformation

Monoclonal Anti-Major Vault Protein (MVP, LRP)
Clone LRP-37
Mouse Culture Supernatant

Product Number **M 7192**

Product Description

Monoclonal Anti-Major Vault Protein (MVP, LRP) (mouse IgG2b isotype) is derived from the LRP-37 hybridoma produced by the fusion SP2/O mouse myeloma cells and lymph nodes cells from a BALB/c mouse immunized with full length cloned human MVP/LRP. The antibody is concentrated from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-Major Vault Protein (MVP, LRP) reacts with an internal epitope of human major vault protein (MVP) (P110)/lung resistance protein (LRP). The antibody may be used in immunocytochemistry, immunohistochemistry (frozen sections and formalin-fixed, paraffin-embedded tissue sections), and immunoblotting.

Many cancer cells treated with chemotherapy agents develop multidrug resistance (MDR). As a result, several different proteins are upregulated in the resistant cells. These proteins include lung resistance related proteins (LRP) (a major vault protein), P-glycoproteins (Pgp/P--170/MDR1 and MDR3 Pgp, efflux pumps), topoisomerase II, glutathione S-transferase, and the multidrug resistance associated proteins (MRP, efflux pump).

Major vault protein (MVP), also known as the lung resistance protein (LRP), 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.

Multidrug-resistant (MDR) cancer cells frequently overexpress the 110 kDa lung resistance-related protein (LRP/MVP). Overexpression of LRP/MVP often predicts a poor response to chemotherapy. By screening a multidrug-resistant non-P-glycoprotein, LRP was isolated. The sequence analysis predicted that the deduced LRP protein (896 amino acids) 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 MVP/LRP have potential value for the detection of MVP/LRP-associated non-Pgp MDR in human tumor samples and play a critical role in determining the relevance of this protein in drug resistance.

Reagent

Monoclonal Anti-Major Vault Protein (MVP, LRP) is supplied as a solution in serum-free culture medium, containing 0.7% bovine serum albumin and 0.1% sodium azide.

Antibody concentration: Approx. 250 μg/ml

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

For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing is not recommended. Storage in frost-free freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

A working antibody dilution of 1:20-1:50 is recommended in immunocytochemistry using 4% paraformaldehyde-fixed cytospin preparations or frozen tissue sections. Pretreatment should be applied.

A working antibody dilution of 1:20-1:50 is recommended in immunohistochemistry using frozen tissue sections.

Pretreatment: Using 4% paraformaldehyde-fixed cytospin preparations or frozen tissue sections, pretreatment should be applied as follows: 10 minutes in 20 mM glycine (pH 7.5) and 10 minutes in a solution of 6 N guanidine hydrochloride in 50 mM Tris-HCl (pH 7.5).

A minimum working antibody dilution of 1:50 is recommended in immunoblotting using a chemiluminescence detection system.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

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