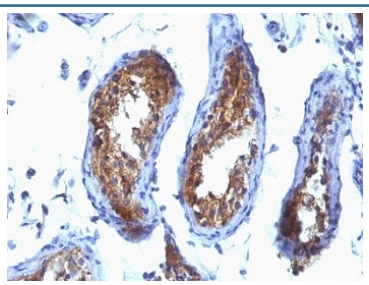
MVP Antibody / Drug Resistance Marker Antibody [clone SPM280] (V3044)

Catalog No.	Formulation	Size
V3044-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3044-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3044SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3044IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	SPM280
Purity	Protein G affinity chromatography
UniProt	Q14764
Localization	Cytoplasmic, nuclear
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This MVP Antibody / Drug Resistance Marker Antibody is available for research use only.



MVP Antibody Testicular Carcinoma IHC. Immunohistochemistry analysis of Major Vault Protein (MVP / LRP) expression in formalin-fixed, paraffin-embedded human testicular carcinoma using clone SPM280 mouse monoclonal antibody. Tumor epithelial cells display strong cytoplasmic HRP-DAB brown staining with a diffuse to granular pattern, while surrounding stromal regions show lower background signal. The staining highlights malignant cell populations within glandular tumor structures, consistent with elevated Major vault protein expression associated with drug resistance and cellular stress response pathways in cancer.

Description

Major Vault Protein (MVP), encoded by the MVP gene, is a central component of vault ribonucleoprotein particles and is strongly associated with multidrug resistance in cancer. MVP is also known as Lung resistance-related protein (LRP), a designation derived from its consistent upregulation in drug-resistant tumor cells. MVP is broadly expressed in normal tissues but is frequently elevated in malignancies where cells exhibit reduced sensitivity to chemotherapeutic agents.

MVP Antibody, also referred to as Major vault protein antibody or LRP antibody in the literature, is widely used as a marker for studying drug resistance mechanisms in cancer. This MVP Antibody is uniquely positioned for identifying tumor cell populations with elevated MVP expression that may contribute to therapeutic failure. The drug resistance marker antibody differentiator is particularly important for studies focused on treatment response, tumor progression, and resistance-associated signaling pathways.

In cancer biology, increased MVP expression has been documented in lung, breast, ovarian, colorectal, and hematologic malignancies. Elevated MVP levels are associated with decreased intracellular accumulation of chemotherapeutic drugs, suggesting a role in drug sequestration or altered intracellular trafficking. MVP may also influence the activity of apoptosis-related pathways, allowing tumor cells to survive under conditions that would normally induce cell death.

A key advantage of using an MVP Antibody in this context is the ability to distinguish between drug-sensitive and drug-resistant cell populations. Differences in MVP expression can be detected across tumor samples or cell lines, enabling comparative analysis of resistance phenotypes. This is particularly valuable for studies investigating mechanisms of acquired resistance or evaluating the impact of therapeutic interventions.

MVP is also involved in signaling pathways such as PI3K-AKT, which regulate cell survival, proliferation, and stress responses. Activation of these pathways in MVP-high cells may further contribute to resistance phenotypes by promoting survival under chemotherapeutic stress. Detection of MVP using a drug resistance marker antibody therefore provides insight into both expression levels and associated signaling changes.

In tissue-based studies, MVP expression can be visualized within tumor architecture, allowing correlation with histopathological features such as tumor grade, differentiation status, and invasive behavior. Spatial variation in MVP expression within tumors may reflect heterogeneous resistance mechanisms, highlighting the importance of localized detection.

The MVP gene is located on chromosome 16p11.2 and encodes a protein that serves both structural and functional roles within vault complexes. Its involvement in drug resistance and stress adaptation makes it a critical biomarker for cancer research.

This MVP antibody is suitable for detecting Major vault protein expression in studies of drug resistance, tumor biology, and therapeutic response.

This MVP antibody is part of a broader collection of research tools designed to support studies in cancer biology, intracellular transport, and drug resistance mechanisms.

Application Notes

Optimal dilution of the MVP Antibody / Drug Resistance Marker Antibody should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9, for 10-20 min followed by cooling at RT for 20 min.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Proteins precipitated from human breast cancer MCF-7 cells were used as the immunogen for the MVP antibody.

Storage

Store the MVP antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

MVP drug resistance antibody, Major vault protein resistance marker antibody, Lung resistance-related protein antibody, LRP chemotherapy resistance antibody, MVP tumor resistance antibody

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