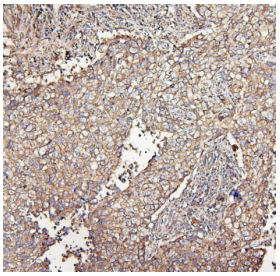
MVP Antibody for FACS / Flow Cytometry Antibody [clone 8B12] (RQ5611)

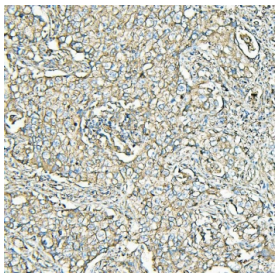
Catalog No.	Formulation	Size
RQ5611	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

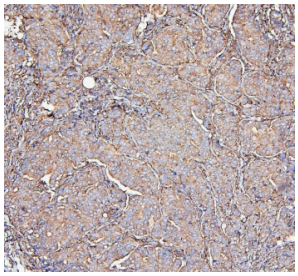
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a
Clone Name	8B12
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	Q14764
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 1-2ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This MVP Antibody for FACS / Flow Cytometry Antibody is available for research use only.



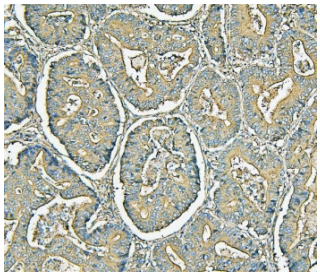
IHC staining of FFPE human lung cancer with MVP antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



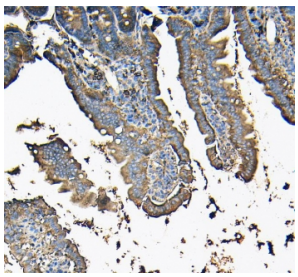
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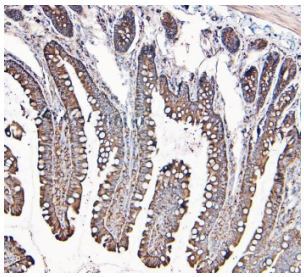
MVP Antibody Breast Cancer IHC. Immunohistochemistry staining of FFPE human breast cancer with MVP antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



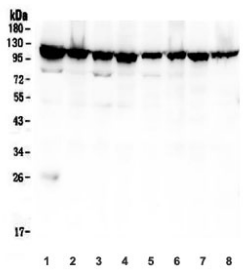
IHC staining of FFPE human colon cancer with MVP antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



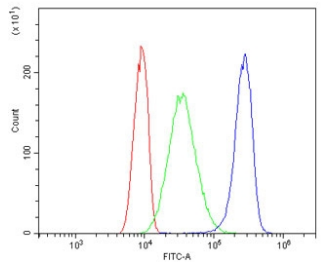
IHC staining of FFPE mouse intestine with MVP antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



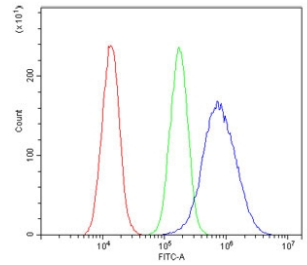
IHC staining of FFPE rat intestine with MVP antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



Western blot testing of human 1) A549, 2) U-2 OS, 3) HepG2, 4) ThP-1, 5) HeLa, 6) SW620, 7) rat RH35 and 8) mouse RAW264.7 lysate with MVP antibody. Observed molecular weight: 104~110 kDa.



MVP Antibody for FACS in Human A431 Cells. Flow cytometry analysis of Major Vault Protein (MVP / LRP) expression in human A431 cells using a mouse monoclonal antibody clone 8B12. Cells were fixed, permeabilized, and stained at 1 ug per million cells. The MVP antibody (blue) shows a clear rightward shift in fluorescence intensity compared to the isotype control (green) and unstained cells (red), indicating specific intracellular detection. The distinct population separation supports accurate gating and quantitative single-cell analysis, consistent with the known expression of Major vault protein in epithelial cancer cells and its role in drug resistance and cellular stress response pathways.



MVP Antibody for FACS in Human A549 Cells. Flow cytometry analysis of Major Vault Protein (MVP / LRP) expression in human A549 cells using a mouse monoclonal antibody (8B12). Cells were fixed, permeabilized, and stained at 1 ug per million cells. The MVP antibody (blue) demonstrates a clear rightward shift relative to the isotype control (green) and unstained cells (red), indicating specific intracellular detection. The separation of populations supports reliable gating and quantitative single-cell analysis, consistent with the known expression of Major vault protein in epithelial-derived cancer cells and its role in drug resistance and cellular stress response pathways.

Description

Major Vault Protein (MVP), encoded by the MVP gene, is the primary structural component of vault ribonucleoprotein particles, large cytoplasmic complexes involved in intracellular transport, signal transduction, and cellular stress responses. MVP is also widely known as Lung resistance-related protein (LRP), reflecting its strong association with multidrug resistance in cancer. MVP is broadly expressed across tissues, with prominent expression in epithelial cells, immune cells, and tumor populations exhibiting therapy-resistant phenotypes.

MVP Antibody for FACS, also referred to as MVP flow cytometry antibody or LRP antibody for FACS in the literature, is specifically designed for precise intracellular quantification of MVP at the single-cell level. This MVP Antibody for FACS / Flow Cytometry Antibody is uniquely positioned for resolving distinct cell populations based on MVP expression, enabling high-resolution analysis of cellular heterogeneity. Clone 8B12 antibody provides consistent epitope-specific detection, supporting reproducible signal separation and clean population gating in flow cytometry workflows.

In flow cytometry applications, MVP is detected following fixation and permeabilization due to its intracellular localization. This approach enables accurate measurement of protein expression within individual cells, rather than averaged signal across bulk lysates. MVP antibody for FACS is particularly valuable for identifying subpopulations within complex samples, including tumor cells with elevated MVP expression associated with drug resistance or survival advantage.

A key strength of clone 8B12 antibody lies in its ability to generate well-defined fluorescence intensity distributions, allowing clear discrimination between low, intermediate, and high MVP-expressing cells. This is especially important in studies where small resistant subpopulations drive treatment failure. Flow cytometry enables rapid, quantitative assessment of these populations across large sample sizes, providing statistically robust data that complements imaging and biochemical approaches.

MVP plays a central role in vault complex assembly and is implicated in intracellular transport processes, including nucleocytoplasmic trafficking and vesicular dynamics. It is also involved in signaling pathways such as PI3K-AKT, where it contributes to regulation of apoptosis and cellular stress responses. Quantitative detection using MVP antibody for FACS allows researchers to monitor how these pathways influence MVP expression at the single-cell level under different experimental conditions.

Elevated MVP expression has been reported in lung, breast, ovarian, and hematologic malignancies, where it is associated with reduced intracellular drug accumulation and enhanced cellular survival under chemotherapeutic stress.

MVP antibody for FACS enables direct comparison of expression levels between drug-sensitive and drug-resistant populations, supporting studies of therapeutic response and resistance mechanisms.

The MVP gene is located on chromosome 16p11.2 and encodes a protein composed of repeating structural domains that assemble into the vault particle. While MVP is predominantly cytoplasmic, its functional importance in cellular adaptation and survival makes it a valuable intracellular marker for flow cytometry-based analysis.

This MVP flow cytometry antibody is suitable for detecting Major vault protein expression in fixed and permeabilized cells, supporting high-resolution analysis of cellular heterogeneity, population dynamics, and drug resistance phenotypes.

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 for FACS / Flow Cytometry Antibody should be determined by the researcher.

Immunogen

A human recombinant protein (amino acids A2-H259) was used as the immunogen for the MVP antibody.

Storage

After reconstitution, the MVP antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

MVP flow cytometry antibody, Major vault protein FACS antibody, Lung resistance-related protein flow cytometry antibody, LRP antibody for FACS, MVP intracellular flow cytometry antibody

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