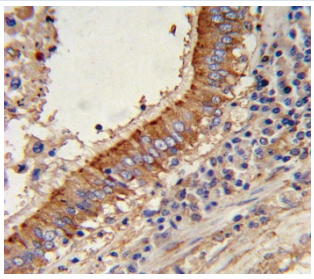
Major Vault Protein Antibody for FACS / MVP Flow Cytometry Antibody (F54845)

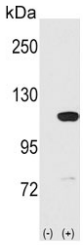
Catalog No.	Formulation	Size
F54845-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F54845-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

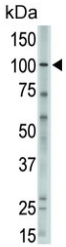
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	Q14764
Localization	Cytoplasmic, nuclear
Applications	Immunohistochemistry (FFPE) : 1:10-1:50 Flow Cytometry : 1:10-1:50 (1x10e6 cells) Western Blot : 1:500-1:1000
Limitations	This Major Vault Protein Antibody for FACS / MVP Flow Cytometry Antibody is available for research use only.



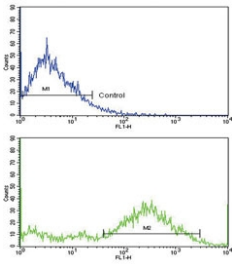
IHC testing of FFPE human lung carcinoma tissue with Major Vault Protein antibody. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



Western blot testing of 1) non-transfected and 2) transfected 293 cell lysate with Major Vault Protein antibody.



Western blot testing of human A375 cell lysate with Major Vault Protein antibody. Expected molecular weight: 104~110 kDa.



Major Vault Protein Antibody for FACS. Flow cytometry analysis of MVP (Major Vault Protein / LRP) expression in human NCI-H292 cells using a rabbit polyclonal antibody. Cells were fixed and permeabilized prior to staining. The Major vault protein antibody (green) shows a clear shift relative to the isotype control (blue), indicating specific intracellular detection of MVP. The defined positive population supports sensitive single-cell analysis of MVP expression, consistent with its role in epithelial cancer cells and involvement 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 known as Lung resistance-related protein (LRP) and is widely studied for its role in multidrug resistance in cancer. MVP is broadly expressed across tissues, with elevated expression frequently observed in epithelial cells, immune populations, and tumor cells exhibiting resistance to chemotherapy.

Major Vault Protein Antibody for FACS, also referred to as MVP flow cytometry antibody or LRP antibody for flow cytometry in the literature, is designed for sensitive intracellular detection of MVP across diverse cell populations. This Major Vault Protein Antibody for FACS / MVP Flow Cytometry Antibody is uniquely positioned for experiments requiring strong signal intensity and reliable detection across variable sample types. As a rabbit polyclonal antibody, it provides multi-epitope recognition, increasing the likelihood of detecting MVP across different conformations and fixation conditions.

In flow cytometry workflows, MVP detection requires fixation and permeabilization due to its intracellular localization. The polyclonal nature of this antibody supports robust signal generation, which is particularly advantageous when analyzing samples with low or heterogeneous MVP expression. This enables detection across a broad dynamic range, making it well suited for complex biological samples where expression levels may vary significantly between cells.

A key advantage of using a polyclonal MVP antibody for FACS is its ability to maintain signal strength even when epitope accessibility is partially compromised during sample preparation. Fixation and permeabilization conditions can alter protein conformation, and multi-epitope recognition helps ensure consistent detection under these conditions. This makes the antibody especially useful for challenging samples, including primary cells, stressed cells, or treated populations.

MVP plays a central role in vault particle assembly and is involved in intracellular transport processes, including movement between cytoplasmic and nuclear compartments. It is also implicated in signaling pathways such as PI3K-AKT

and contributes to regulation of apoptosis, autophagy, and cellular stress responses. Flow cytometry analysis using a Major vault protein antibody enables quantification of these changes across large numbers of cells, providing insight into population-level responses.

Elevated MVP expression is a hallmark of multidrug resistance in many cancers, including lung, breast, ovarian, and hematologic malignancies. Increased MVP levels are associated with reduced intracellular drug accumulation and enhanced survival under chemotherapeutic stress. MVP antibody for FACS supports rapid comparison of expression levels across treatment conditions, enabling efficient evaluation of resistance-associated changes.

The MVP gene is located on chromosome 16p11.2 and encodes a protein composed of repeating structural domains that assemble into the vault particle. Its widespread expression and involvement in key cellular processes make it an important intracellular marker for flow cytometry-based studies.

This MVP antibody for FACS is suitable for detecting Major vault protein expression in fixed and permeabilized cells, supporting sensitive analysis of heterogeneous populations, intracellular signaling, and drug resistance mechanisms.

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

The stated application concentrations are suggested starting points. Titration of the Major Vault Protein Antibody for FACS / MVP Flow Cytometry Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 863-893 from the human protein was used as the immunogen for the Major Vault Protein antibody.

Storage

Aliquot the Major Vault Protein antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

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