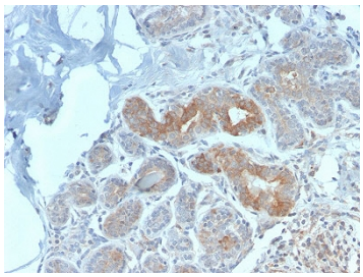
MVP Antibody / Vault Complex Structural Protein Antibody [clone VP2897R] (V7393)

Catalog No.	Formulation	Size
V7393-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7393-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7393SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7393IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

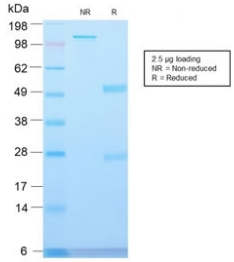
Recombinant RABBIT MONOCLONAL

Bulk quote request

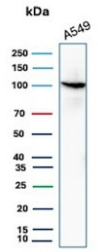
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	VP2897R
Purity	Protein A affinity chromatography
UniProt	Q14764
Localization	Cytoplasmic, nuclear
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT Western Blot : 2-4ug/ml
Limitations	This MVP Antibody / Vault Complex Structural Protein Antibody is available for research use only.



MVP Antibody Breast Carcinoma IHC. Immunohistochemistry analysis of Major Vault Protein (MVP / LRP) expression in FFPE human breast carcinoma using clone VP2897R rabbit monoclonal antibody. Tumor epithelial cells exhibit moderate cytoplasmic HRP-DAB brown staining with a diffuse to finely granular pattern, consistent with vault complex structural localization, while surrounding stromal regions show comparatively lower signal. The staining highlights gland-forming tumor structures and cellular architecture, supporting the role of Major vault protein as a core structural component of vault particles within malignant epithelial cells. Heat-induced epitope retrieval was performed in pH 9 10mM Tris with 1mM EDTA for 10-20 minutes followed by cooling prior to antibody incubation.



SDS-PAGE analysis of purified, BSA-free recombinant MVP antibody (clone VP2897R) as confirmation of integrity and purity.



MVP Antibody WB. Western blot analysis of Major Vault Protein (MVP / LRP) expression in human A549 cell lysate using clone VP2897R rabbit monoclonal antibody. A single prominent band is detected at approximately 104-110 kDa, consistent with the predicted molecular weight of Major vault protein. The clean band pattern supports specific detection of MVP as a core structural component of vault complexes, aligning with its role in cytoplasmic ribonucleoprotein assembly and intracellular organization.

Description

Major Vault Protein (MVP), encoded by the MVP gene, is the principal structural component of vault ribonucleoprotein particles, among the largest cytoplasmic macromolecular assemblies in eukaryotic cells. MVP is also widely known as Lung resistance-related protein (LRP), and is broadly expressed across epithelial tissues, immune cells, and proliferative compartments. MVP forms the outer shell of vault complexes, accounting for the majority of their mass and providing the structural framework required for vault particle integrity and stability.

MVP Antibody, also referred to as Major vault protein antibody or LRP antibody in the literature, is widely used for studying vault complex assembly and structural organization. This MVP Antibody is uniquely positioned for investigations focused on the architecture of vault particles, including how MVP oligomerizes into the characteristic barrel-shaped structure and how these complexes are distributed throughout the cytoplasm. The structural role of MVP distinguishes this application from signaling-focused or disease-marker studies, making it particularly relevant for research centered on ribonucleoprotein complex biology.

Vault particles are composed primarily of MVP along with accessory components such as telomerase-associated protein 1 (TEP1) and vault-associated RNAs. MVP monomers assemble through repeating alpha-helical domains to form large symmetrical structures that create an internal cavity, suggesting a role in molecular storage or transport. The ability to detect MVP using a Major vault protein antibody enables researchers to study how these complexes form, maintain stability, and respond to changes in cellular conditions.

In cellular systems, MVP is typically localized throughout the cytoplasm, often displaying diffuse staining with punctate or granular enrichment corresponding to vault particle clusters. Perinuclear accumulation is frequently observed, consistent with interactions between vault complexes and intracellular transport pathways. These structural distribution patterns are critical for understanding how vault particles integrate into the broader cytoplasmic architecture and coordinate with

cytoskeletal elements.

A key advantage of using this MVP Antibody for structural studies is the ability to monitor changes in vault organization under different experimental conditions. Alterations in MVP expression or assembly can impact vault particle formation and may influence cellular organization at the macromolecular level. Disruption of MVP has been shown to affect vault integrity, highlighting its essential role in maintaining these complexes.

Beyond its architectural function, MVP contributes to the physical scaffold that supports interactions between vault-associated proteins and RNA components. This structural platform is thought to facilitate coordination of transport and signaling processes, although the precise mechanisms remain an area of active investigation. The ability to detect MVP reliably is therefore critical for dissecting the biology of vault particles.

The MVP gene is located on chromosome 16p11.2 and encodes a protein composed of multiple repeating domains that drive self-assembly into vault structures. Its high level of conservation across species underscores its fundamental importance in cellular organization.

Major vault protein antibody (clone VP2897R) is suitable for detecting MVP expression in studies focused on vault complex structure, ribonucleoprotein assembly, and cytoplasmic architecture.

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 recombinant MVP Antibody / Vault Complex Structural Protein Antibody should be determined by the researcher.

1. 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

Recombinant human protein was used as the immunogen for the MVP antibody.

Storage

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

Alternate Names

Major vault protein antibody, Lung resistance-related protein antibody, LRP antibody, vault protein structural antibody, MVP complex protein antibody