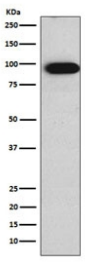
Villin Antibody / Cytoskeletal Remodeling Protein Antibody [clone AFOA-22] (RQ5271)

Catalog No.	Formulation	Size
RQ5271	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	AFOA-22
Purity	Affinity purified
UniProt	P09327
Applications	Western Blot : 1:1000-1:5000
Limitations	This Villin antibody is available for research use only.



Villin Antibody for WB. Western blot analysis of Villin-1 (VIL1) using human Caco-2 cell lysate with Villin Antibody / Cytoskeletal Remodeling Protein Antibody (clone AFOA-22). Lane 1: human Caco-2 lysate. A band is detected at approximately 93 kDa, consistent with the predicted molecular weight of Villin-1 (VIL1). This signal aligns with the known high expression of Villin in differentiated intestinal epithelial cells and supports its role in dynamic actin remodeling within enterocyte cytoskeletal networks.

Description

Villin-1 (VIL1) is a calcium-sensitive actin regulatory protein that functions as a rapid-response mediator of cytoskeletal remodeling in epithelial cells. Villin Antibody / Cytoskeletal Remodeling Protein Antibody (clone AFOA-22) is specifically positioned to detect Villin in contexts where actin filament dynamics, rather than static structure, are the primary biological focus. Villin antibody, also known as Villin-1 antibody or VIL1 antibody, is therefore highly relevant in studies examining cytoskeletal turnover, epithelial stress responses, and injury-driven remodeling processes.

Unlike Villin antibodies framed around brush border architecture or epithelial identity, this Villin Antibody / Cytoskeletal Remodeling Protein Antibody is differentiated by its emphasis on dynamic actin regulation. Villin is a member of the gelsolin superfamily and can rapidly switch between actin-severing, capping, and nucleating functions depending on intracellular calcium levels. These reversible activities allow Villin to actively dismantle and rebuild actin filaments, making it a central regulator of cytoskeletal plasticity rather than a purely structural component of microvilli.

Functionally, Villin plays a key role during epithelial injury, regeneration, and high-turnover states, where cytoskeletal reorganization is required for cell survival and adaptation. Under conditions such as mechanical stress, inflammation, or tissue damage, Villin-mediated actin remodeling contributes to changes in membrane dynamics, cell shape, and epithelial restitution. This positions Villin as an important molecular marker for studies focused on epithelial repair mechanisms, cytoskeletal turnover, and adaptive remodeling rather than baseline tissue architecture.

From a research perspective, this Villin antibody is particularly useful for investigators studying actin remodeling pathways, injury-induced cytoskeletal changes, and epithelial turnover biology, where Villin activity reflects ongoing structural reorganization. Clone AFOA-22 supports detection of Villin in these dynamic biological contexts, providing a tool aligned with mechanistic cell biology applications rather than purely histological or differentiation-based analyses.

Application Notes

Optimal dilution of the Villin Antibody / Cytoskeletal Remodeling Protein Antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human Villin / VIL1 was used as the immunogen for the Villin Antibody / Cytoskeletal Remodeling Protein Antibody.

Storage

Store the Villin antibody at -20oC.

Alternate Names

Villin-1 antibody, VIL1 antibody, Villin actin remodeling antibody, Villin cytoskeleton regulator antibody