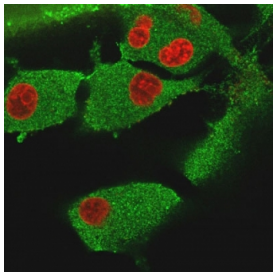
VCL Antibody / Vinculin Antibody [clone VCL/3617] (V8475)

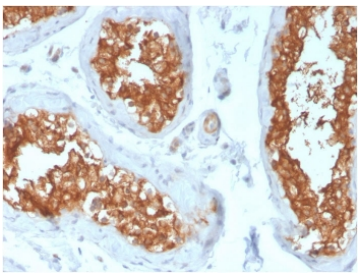
Catalog No.	Formulation	Size
V8475-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8475-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8475SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

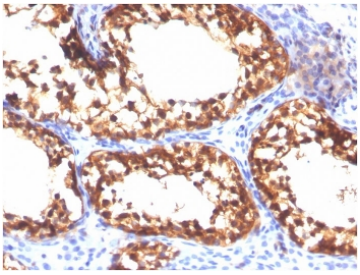
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	VCL/3617
Purity	Protein G affinity chromatography
UniProt	P18206
Localization	Cytoplasmic
Applications	Immunofluorescence: 1-2ug/ml Flow cytometry: 1-2ug/million cells Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This VCL Antibody / Vinculin Antibody is available for research use only.



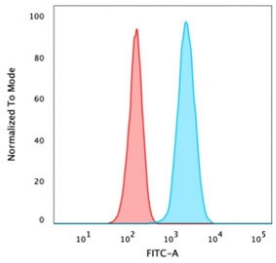
VCL Antibody Human U-87 MG Cell IF. Immunofluorescence analysis of PFA-fixed human U-87 MG cells demonstrates Vinculin expression (green) using VCL Antibody / Vinculin Antibody, clone VCL/3617, with nuclei counterstained using RedDot (red). The staining reveals predominantly cytoplasmic localization with enrichment at sites of cell adhesion, consistent with the known distribution of vinculin within focal adhesion complexes. This VCL Antibody is well suited for investigating focal adhesion dynamics, cytoskeletal organization, cell adhesion, and mechanotransduction signaling.



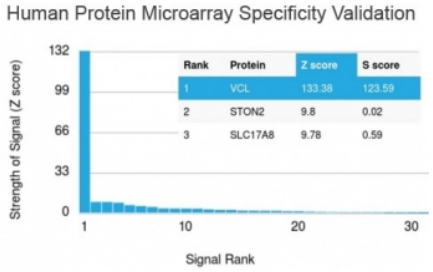
VCL Antibody Human Testis IHC. Immunohistochemical analysis of FFPE human testis demonstrates strong Vinculin expression with prominent membranous and cytoplasmic staining in seminiferous tubules. Heat-induced epitope retrieval was performed in pH9 Tris-EDTA buffer before staining with VCL Antibody / Vinculin Antibody, clone VCL/3617, followed by HRP detection and DAB visualization. The staining pattern is consistent with the localization of vinculin at focal adhesion complexes and sites of cytoskeletal attachment. This VCL Antibody is well suited for studies of cell adhesion, focal adhesion biology, cytoskeletal organization, and VCL protein expression.



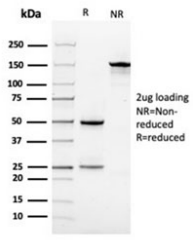
VCL Antibody Human Testis Seminiferous Tubule IHC. Immunohistochemical analysis of FFPE human testis demonstrates strong Vinculin expression with prominent membranous and cytoplasmic staining throughout the seminiferous tubules. Heat-induced epitope retrieval was performed in pH9 Tris-EDTA buffer before staining with VCL Antibody / Vinculin Antibody, clone VCL/3617, followed by HRP detection and DAB visualization. The distinct staining pattern highlights Vinculin localization at sites of cell-cell and cell-matrix adhesion within the seminiferous epithelium. This VCL Antibody is well suited for studies of focal adhesion biology, cytoskeletal organization, cell adhesion, and VCL protein expression.



VCL Antibody Human U-87 MG FACS. Flow cytometry analysis of PFA-fixed human U-87 MG cells stained with VCL Antibody / Vinculin Antibody, clone VCL/3617, shows a pronounced rightward fluorescence shift (blue) compared with the isotype control (red), demonstrating specific detection of intracellular Vinculin. The clear separation between the antibody and control populations supports selective staining of VCL in U-87 MG cells. This VCL Antibody is suitable for studies of focal adhesion biology, cytoskeletal organization, cell adhesion, and mechanotransduction signaling.



VCL Antibody HuProt Protein Microarray Validation. Protein microarray analysis using a HuProt(TM) array containing more than 19,000 full-length human proteins demonstrates the exceptional specificity of VCL Antibody / Vinculin Antibody, clone VCL/3617. VCL was identified as the top-ranked target with a Z-score of 133.38 and an S-score of 123.59, while all other proteins produced substantially weaker signals. These results confirm highly selective recognition of vinculin with minimal off-target binding, supporting the use of this clone for studies of focal adhesion biology, cytoskeletal organization, cell adhesion, and mechanotransduction signaling.



SDS-PAGE analysis of purified, BSA-free Vinculin antibody as confirmation of integrity and purity.

Description

VCL Antibody recognizes vinculin (VCL), a highly conserved cytoskeletal protein that serves as a key structural component of focal adhesions and adherens junctions. Encoded by the VCL gene, vinculin forms an essential mechanical link between integrins, cadherins, and the actin cytoskeleton, allowing cells to maintain adhesion while responding to extracellular mechanical forces. Through interactions with proteins including talin, alpha-actinin, paxillin, and alpha-catenin, vinculin regulates cell morphology, migration, proliferation, and tissue integrity. As a result, VCL Antibody is widely used to investigate focal adhesion dynamics, cytoskeletal organization, and mechanotransduction.

Vinculin is expressed in numerous tissues and is particularly abundant in cells that experience significant mechanical stress. Activation of vinculin exposes multiple binding domains that stabilize adhesion complexes and strengthen actin filament attachment during cell spreading and migration. An alternatively spliced muscle-specific isoform, metavinculin, contributes to specialized adhesion structures within cardiac and smooth muscle. Altered VCL expression or function has been associated with cardiomyopathy, impaired wound repair, and increased cancer cell invasion, highlighting its importance in both normal physiology and disease.

The VCL gene has become a common marker in studies of cell adhesion, migration, mechanobiology, and cancer progression. Changes in vinculin localization frequently reflect remodeling of focal adhesions during epithelial-to-mesenchymal transition, metastasis, and extracellular matrix interactions. Consequently, VCL Antibody is valuable for examining signaling pathways that coordinate adhesion-dependent cellular responses and cytoskeletal remodeling.

This mouse monoclonal clone VCL/3617 has been validated by Protein Microarray analysis, demonstrating highly specific recognition of vinculin with excellent HuProt Z-score and S-score performance. A VCL Antibody is an effective tool for detecting endogenous vinculin expression and investigating focal adhesion biology, cytoskeletal organization, cell migration, mechanotransduction, and VCL-mediated signaling pathways.

Learn more about focal adhesion biology and vinculin research by visiting our Vinculin Antibody / Focal Adhesion Protein Antibody page.

Application Notes

Optimal dilution of the VCL Antibody / Vinculin Antibody should be determined by the researcher.

Immunogen

Recombinant full-length human Vinculin protein was used as the immunogen for the VCL antibody.

Storage

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

Alternate Names

VCL antibody, Vinculin antibody

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