

# Recombinant Human VCL

**Cat. No.** VCL-7919H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Human Vinculin is produced by our E. coli expression system. The target protein is expressed with sequence (Pro2Gln1066) of Human Vinculin.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>      | Vinculin is a focal adhesion and cytoskeletal protein that distributed mainly at cellcell junctions and cellextracellular matrix (ECM) adhesion that belongs to the Vinculin/alphaCatenin family. Vinculin is an Actinbinding protein and component of the ActinLinking Functional module that senses and feels the mechanical properties of the extracellular environment. Vinculin is also a key factor that couples, transmits, transduces, and regulates mechanical force between the cytoskeleton and adhesion receptors. Vinculin generally forms two structural states, an open (active) and closed (inactive) state, which are controlled by conformational interaction(s) between the head and tail domains. Vinculin is involved in the mechanochemical signal transmission of cells by binding to a variety of focal adhesion or cytoskeletal proteins, and plays important roles in cell adhesion, extension, motion, proliferation and survival. |
| <b>Form</b>             | Lyophilized from a 0.2 µM filtered solution of 20mM PB, 150mM NaCl, pH 7.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>AA Sequence</b>      | MPVFHTRTIE SILEPVAQQI SHLVIMHEEG EVDGKAIPDL TAPVAAVQAA<br>VSNLVRVGKE TVQTTEDQI LKRDMPPAFI KVENACTKLV QAAQMLQSDP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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YSVPARDYLI DGSRGILSGT S DLLLTFDE AEVRKIIRVC KGILEYLTVA  
 EVVETMEDLV TYTKNLGPGM TKMAKMIDER QQ ELTHQEH RVMLVNSMNT  
 VKELLPVLIS AMKIFVTTKN SKNQGIEEAL KNRNFTLEKM SAE INEIIR  
 VLQLTSWDED

|                |                                                                                                                                                                                                                                                         |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>  | Greater than 95% as determined by reducing SDS-PAGE.                                                                                                                                                                                                    |
| <b>Notes</b>   | For research use only.                                                                                                                                                                                                                                  |
| <b>Storage</b> | Lyophilized protein should be stored at less than 20°C. though stable at room temperature for 3 weeks.Reconstituted protein solution can be stored at 4-7°C. for 2-7 days.Aliquots of reconstituted samples are stable at less than 20°C. for 3 months. |

## GENE INFORMATION

|                        |                                                  |
|------------------------|--------------------------------------------------|
| <b>Gene Name</b>       | VCL vinculin [ Homo sapiens ]                    |
| <b>Official Symbol</b> | VCL                                              |
| <b>Synonyms</b>        | VCL; vinculin; metavinculin; MVCL; CMD1W; CMH15; |
| <b>Gene ID</b>         | 7414                                             |
| <b>mRNA Refseq</b>     | NM_003373                                        |
| <b>Protein Refseq</b>  | NP_003364                                        |
| <b>MIM</b>             | 193065                                           |
| <b>UniProt ID</b>      | P18206                                           |

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|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chromosome Location</b> | 10q22.1-q23                                                                                                                                                                                                                                                                                                                                      |
| <b>Pathway</b>             | Adherens junction, organism-specific biosystem; Adherens junction, conserved biosystem; Amoebiasis, organism-specific biosystem; Amoebiasis, conserved biosystem; Bacterial invasion of epithelial cells, organism-specific biosystem; Bacterial invasion of epithelial cells, conserved biosystem; Focal Adhesion, organism-specific biosystem; |
| <b>Function</b>            | Rho GTPase binding; NOT actin binding; alpha-catenin binding; beta-catenin binding; beta-dystroglycan binding; cadherin binding; protein binding; structural molecule activity;                                                                                                                                                                  |

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