Data Sheet (Cat.No.TMPY-02548)

TargetMol

Vinculin Protein, Human, Recombinant (His)

General Information

Synonyms:	CMD1W;MV;HEL114;CMH15;MVCL;vinculin
Protein Construction:	A DNA sequence encoding the human VCL (P18206-2) (Met 1-Gln 1066) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Met 1
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P18206-2
Molecular Weight:	118 kDa (predicted); 115 kDa (reducing conditions)

QC Testing

Biological Activity:	Immobilized Recombinant Human VCL/Vinculin Protein (His Tag) (Cat#TMPY-02548) at 1 μg/mL (100 μL/well) can bind Vinculin Antibody, Rabbit PAb, Antigen Affinity Purified, the EC50 is 1.0-3.0 ng/mL(QC tested).
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Vinculin (VCL) is a cytoskeletal protein that is closely related to both cell-matrix interactions and cell-cell junctions. VCL is a membrane-cytoskeletal protein in focal adhesion plaques that is involved in linkage of integrin adhesion molecules to the actin cytoskeleton. The protein contains an acidic N-terminal domain and a basic C-terminal domain separated by a proline-rich middle segment. This protein has multi-ligand properties and has been found

to interact with a number of microfilament associated proteins, such as talin, a-actinin, and paxillin, which reportedly bind to either the head or tail domains of vinculin.

Reference

Massoumi R,et al.(2001) Leukotriene D(4) affects localisation of vinculin in intestinal epithelial cells via distinct tyrosine kinase and protein kinase C controlled events. J Cell Sci. 114(10): 1925-34.
Turner CE,et al.(1994) Primary sequence of paxillin contains putative SH2 and SH3 domain binding motifs and multiple LIM domains: identification of a vinculin and pp125Fak-binding region. J Cell Sci. 107 (6): 1583-91.
Strasser P,et al.(1993) Variable and constant regions in the C-terminus of vinculin and metavinculin: cloning and expression of fragments in E. coli. FEBS Lett. 317: 189-194.