

Vinculin Protein, Mouse (HEK293, His)

Cat. No.:	HY-P73549
Synonyms:	Vinculin; Metavinculin; VCL
Species:	Mouse
Source:	HEK293
Accession:	Q64727 (M1-Q1066)
Gene ID:	22330
Molecular Weight:	Approximately 118 kDa

PROPERTIES

Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Vinculin at 1 µg/ml can bind Anti-Vinculin antibody, the EC ₅₀ of human Vinculin protein is 1.426 ng/mL, corresponding to a specific activity is 7.012×10 ⁵ units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Vinculin, a crucial actin filament (F-actin)-binding protein, actively participates in cell-matrix adhesion and cell-cell adhesion processes. It plays a regulatory role in the expression of cell-surface E-cadherin and enhances mechanosensing by the E-cadherin complex, contributing to cell morphology and locomotion (By similarity). Notably, vinculin exhibits self-association properties and is part of a complex that includes THSD1, PTK2/FAK1, TLN1, and VCL (By similarity). Its interactions extend to various proteins such as APBB1IP, NRAP, TLN1, SYNM, CTNNB1, SORBS1, and CTNNA1, each interaction serving specific cellular functions. The interaction with CTNNB1 is particularly essential for vinculin's localization to cell-cell junctions and its role in regulating the cell surface expression of E-cadherin (By similarity). Additionally, vinculin binds to ACTN4, triggering conformational changes that further contribute to its functional versatility (By similarity).
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA