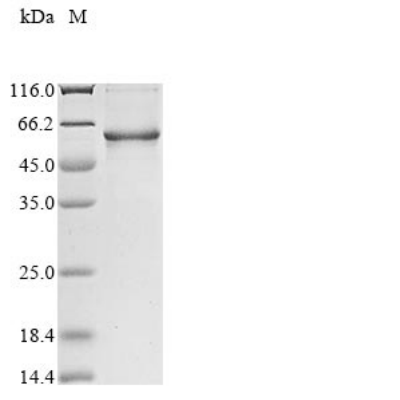
Recombinant Human Vitronectin (VTN)

Product Code	CSB-EP025944HU
Abbreviation	Recombinant Human VTN protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P04004
Form	Liquid or Lyophilized powder
Storage Buffer	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	DQESCKGRCTEGFNVDKKCQCDELCSYYQSCCTDYTAECKPQVTRGDVFTM PEDEYTVYDDGEEKNNATVHEQVGGPSLTSDLQAQSKGNPEQTPVLKPEEEA PAPEVGASKPEGIDSRPETLHPGRPQPPAEEELCSGKPFDAFTDLKNGSLFAF RGQYCYELDEKAVRPGYPKLIRDVWGIEGPIDAAFTRINCQGKTYLFKGSQYW RFEDGVLDPDYPRNISDGFDGIPDNVDAALALPAHSYSGRERVYFFKGKQYW EYQFQHQPSQEECEGSSLSAVFEHFAMMQRDSWEDIFELLFWGRTSAGTRQ PQFISRDWHGVPGQVDAAMAGRIYISGMAPRPSLAKKQRFRHRNRKGYRSQ RGHSRGRNQNSRRPSRATWLSLFSSEESNLGANNYDDYRMDWLVPATCEPI QSVFFFSGDKYYRVNLRTRRVDTVDPPYPRSIAQYWLGCPAPGHL
Research Area	Cardiovascular
Source	E.coli
Target Names	VTN
Expression Region	20-478aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	Tag-Free
Mol. Weight	52.4 kDa
Protein Length	Full Length of Mature Protein
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The recombinant human VTN protein is produced by inserting the VTN gene fragment (20-478aa) into a plasmid vector, followed by introducing the recombinant vectors into E.coli cells. Once expressed, the VTN protein is subjected to multiple purification processes involving affinity chromatography. Following purification, SDS-PAGE is employed to check the protein's purity, exceeding 85%.

Human vitronectin (VTN) is a multifunctional glycoprotein that plays a crucial role in various biological processes, including cell adhesion, migration, and the regulation of the immune response. It is predominantly synthesized in the liver and is found in the extracellular matrix (ECM) as well as in plasma [1][2]. Vitronectin is primarily involved in cell adhesion through its interaction with integrins, particularly the αvβ3 and αvβ5 integrins, via its Arg-Gly-Asp (RGD) domain [3][4][5]. This adhesive property is critical for various physiological processes, including wound healing, tissue repair, and the metastatic spread of cancer cells [6][7]. In the context of cancer, altered vitronectin levels have been associated with different stages of tumor progression, suggesting its potential as a biomarker for certain malignancies, including breast and ovarian cancers [6][7][8].

Moreover, vitronectin is implicated in regulating the complement system, particularly in inhibiting the formation of the membrane attack complex (MAC), which is essential for protecting host cells from lysis by the immune system [9]. This function is particularly relevant in bacterial infections, where pathogens such as Neisseria meningitidis and Yersinia pestis exploit vitronectin to enhance their adhesion to host cells and evade immune responses [1][5].

References:

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Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.