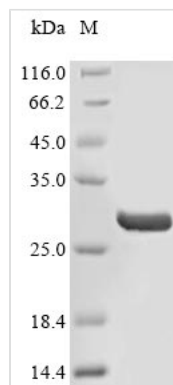




# Recombinant Human Fibronectin (FN1), partial

<b>Product Code</b>	CSB-EP008759HU1
<b>Abbreviation</b>	Recombinant Human FN1 protein, partial
<b>Storage</b>	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.
<b>Uniprot No.</b>	P02751
<b>Form</b>	Liquid or Lyophilized powder
<b>Storage Buffer</b>	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.
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Purity</b>	Greater than 90% as determined by SDS-PAGE.
<b>Sequence</b>	TASSFVSWVSASDTVSGFRVEYELSEEGDEPQYLDLPSTATSVNIPDLLPGR KYIVNVYQISEDGEQSLILSTSQTTPADAPPDPTVDQVDDTSIVVRWSRPQAPI TGYRIVYSPSVEGSSTELNLPETANSVTLSDLQPGVQYNITIYAVEENQUESTPV VIQQETTGTTPRSDTVPSPR
<b>Research Area</b>	Cancer
<b>Source</b>	E.coli
<b>Target Names</b>	FN1
<b>Expression Region</b>	732-911aa
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	His-tag
<b>Mol. Weight</b>	23.6 kDa
<b>Protein Length</b>	Partial

## Image



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



## Description

The recombinant human Fibronectin (FN1) protein expression in E.coli cells requires the insertion of a DNA fragment encoding the human FN1 protein (732-911aa) into a plasmid vector along with an N-terminal His tag gene and the transferral of this vector into E.coli cells. The positive cells are screened, cultured, and induced to express the FN1 protein. The cells are lysed to harvest the recombinant human FN1 protein, which is purified through affinity purification and then detected by SDS-PAGE and subsequent staining of the gel with Coomassie Brilliant Blue. The purity of this recombinant human FN1 protein is over 90%.

FN1 is a large glycoprotein that plays a significant role in the extracellular matrix (ECM) assembly. It acts as a scaffold for depositing other ECM proteins, such as collagens [2]. Fibronectin facilitates interactions between cells and the ECM [1]. It binds to integrins via specific binding sites, notably the Arg-Gly-Asp (RGD) sequence, promoting the formation of insoluble fibrils within the ECM [3]. Integrins, such as  $\alpha V\beta 1$  and  $\alpha 5\beta 1$ , interact with fibronectin and regulate key cellular processes including embryogenesis, wound healing, blood coagulation, host defense, and metastasis [4][5]. The matrix form of fibronectin is essential for cell adhesion and migration, particularly during embryogenesis, wound healing, and inflammatory responses [6].

### References:

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- [3] P. Koistinen and J. Heino, The selective regulation of  $\alpha v\beta 1$  integrin expression is based on the hierarchical formation of  $\alpha v$ -containing heterodimers, Journal of Biological Chemistry, vol. 277, no. 27, p. 24835-24841, 2002.  
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- [5] Q. Zhang, T. Sakai, J. Nowlen, I. Hayashi, R. Fässler, & D. Mosher, Functional  $\beta 1$ -integrins release the suppression of fibronectin matrix assembly by vitronectin, Journal of Biological Chemistry, vol. 274, no. 1, p. 368-375, 1999.  
<https://doi.org/10.1074/jbc.274.1.368>
- [6] J. Hang, E. Zemskov, L. Lóránd, & A. Belkin, Identification of a novel recognition sequence for fibronectin within the nh2-terminal  $\beta$ -sandwich domain of tissue transglutaminase, Journal of Biological Chemistry, vol. 280, no. 25, p. 23675-23683, 2005. <https://doi.org/10.1074/jbc.m503323200>

## 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.