Human Fibronectin / Fibronectin Fragment 2 Protein (His Tag)

Catalog Number: **10314-H08H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CIG; ED-B; FINC; FN; FNZ; GFND; GFND2; LETS; MSF

Protein Construction:

A DNA sequence encoding the Fragment 2 (Ser 607-Pro 1265) of humanFibronectin (NP_997639.1) was expressed with a C-terminal polyhistidine tag.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE.

Bio Activity:

Measured by the ability of the immobilized protein to support the adhesion of NIH-3T3 mouse embryonic fibroblast cells. When cells are added to Vitronectin coated plates (2.5 μg/mL and 100 μL/well), approximately 35%-60% cells will adhere specifically after 35 minutes at 37℃.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Ser 607

Molecular Mass:

The secreted recombinant human Fibronectin 1 fragment2 (FN1.2) consists of 670 amino acids and has a calculated molecular mass of 73.2 kDa. As a result of glycosylation, rhFN1.2 migrates as an approximately 85-100 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.2

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

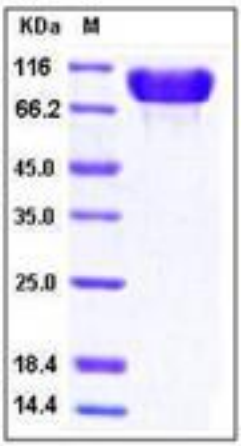
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Fibronectin (FN) is a glycoprotein component of the extracellular matrix of the extracellular matrix (ECM) with roles in embryogenesis, development, and wound healing. More recently, FN has emerged as player in platelet thrombus formation and diseases associated with thrombosis including vascular remodeling, atherosclerosis, and cardiac repair following a myocardial infarct. Each monomer of FN consists of three types of homologous repeating units, that is 12 type I repeats, two type II repeats and 15-17 type III repeats. The occurrence of multiple isoforms results from alternative mRNA splicing of the ED-A, ED-B and III-CS regions, and subsequent post-translational modification. As an ECM component and one of the primary cell adhesion molecules, Fibronectin can be a ligand for fibrin, heparin, chondroitin sulfate, collagen/gelatin, as well as many integrin receptors through which FN mediates the variety of cellular signaling pathways. The study of solid human tumors showed among the early signs of malignant transformation the fragmentation of pericellular FN, concommitent with the increase of its production by the peritumoral stroma. These results should encourage further investigations concerning the potential importance of Fn production and breakdown during cancer progression. FN1 expression has been described to increase significantly from the morula towards the early blastocyst stage, suggesting that FN1 may also be involved in early blastocyst formation. The fragment 2 of FN comprises the first 7 FN type III repeats and is suggested to be important for self association during fibril growth via the key module III2.

References

1.Labat-Robert J. (2002) Fibronectin in malignancy. Semin Cancer Biol. 12(3): 187-95. 2.Goossens K, *et al.* (2009) Quantification of fibronectin 1 (FN1) splice variants, including two novel ones, and analysis of integrins as candidate FN1 receptors in bovine preimplantation embryos. BMC Dev Biol. 9: 1. 3.Maurer LM, *et al.* (2010) Emerging roles of fibronectin in thrombosis. Thromb Res. 125(4): 287-91.