

GMP Recombinant Human FN-1 (carrier-free)

Catalog# / Size	775314 / 25 µg 775316 / 100 µg
Other Names	Fibronectin, FN, FN1, Cold-insoluble globulin, CIG, Large external transformation-sensitive protein, LETS
Description	Fibronectin (FN) is an adhesive glycoprotein found as insoluble components of the extracellular matrix (ECM) or as soluble dimeric forms in plasma. Fibronectin binds chondroitin sulfate, collagen, fibrin, heparin, and many integrin receptors through which it mediates multiple cellular signaling pathways. Conversion of soluble fibronectin to fibronectin fibrils is initiated by binding to cell surface integrins. Fibronectin is involved in cell adhesion, cell motility, wound healing and maintenance of cell morphology. It also participates in osteoblast compaction and is essential for osteoblast mineralization. Fibronectin is thought to play a role in platelet thrombus formation and other diseases associated with thrombosis including atherosclerosis and cardiac repair following a myocardial infarct. Fibronectin plays an important role in coordinating interaction between the ECM and cancer cells in tumors. Its upregulation enhances cancer cell survival, proliferation, and invasion. Fibronectin monomers consist of three types of homologous repeats, type I, II and III domains. A fragment from the first type III repeat, known as Anastellin, binds to fibronectin and induces fibril formation named superfibronectin. Superfibronectin exhibits enhanced adhesive properties and inhibits tumor growth, angiogenesis, and metastasis.

Product Details

Source	Human NF-1, amino acid (Gln32-Pro1991) (Accession: # BC117176) with a C-terminal 8His-GGQ tag was expressed in 293E cells.
Molecular Mass	The 1973 amino acid recombinant protein has a predicted molecular mass of approximately 217 kD. The DTT-reduced and non-reduced protein migrates at approximately 180 – 220 kD by SDS-PAGE. The predicted N-terminal amino acid is Gln.
Purity	> 95%, as determined by Coomassie stained SDS-PAGE.
Formulation	0.1 µm filtered protein solution is in PBS, pH 7.2.
Endotoxin Level	Less than 0.1 EU per µg of protein as determined by the LAL method.
Concentration	0.5 mg/mL
Storage & Handling	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to six months, or at -70°C or colder until the expiration date. For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20°C or colder. Stock solutions can also be prepared at 50 - 100 µg/mL in appropriate sterile buffer, carrier protein such as 0.2 - 1% endotoxin-free BSA or HSA can be added when preparing the stock solution. Aliquots can be stored between 2°C and 8°C for up to one week or stored at -20°C or colder for up to 3 months. Avoid repeated freeze/thaw cycles.
Activity	Immobilized recombinant human FN-1 supports the adhesion of mouse L929 cells in a dose dependent manner. The ED ₅₀ for this effect is 15 – 60 ng/mL.
Application	Bioassay Cell Culture
Application Notes	BioLegend carrier-free recombinant proteins provided in liquid format are shipped on blue ice. Our comparison testing data indicates that when handled and stored as recommended, the liquid format has equal or better stability and shelf-life compared to commercially available lyophilized proteins after reconstitution. Our liquid proteins are verified in-house to maintain activity after shipping on blue ice and are backed by our 100% satisfaction guarantee . If you have any concerns, contact us at tech@biolegend.com .
Disclaimer	GMP Recombinant Proteins. BioLegend GMP recombinant proteins are manufactured in a dedicated GMP facility and compliant with ISO 13485:2016. For research or <i>ex vivo</i> cell processing use. Not for use in diagnostic or therapeutic procedures. Our processes include: <ul style="list-style-type: none">• Batch-to-batch consistency• Material traceability

- Documented procedures
- Documented employee training
- Equipment maintenance and monitoring records
- Lot-specific certificates of analysis
- Quality audits per ISO 13485:2016
- QA review of released products

BioLegend GMP recombinant proteins are manufactured and tested in accordance with USP Chapter 1043, Ancillary Materials for Cell, Gene and Tissue-Engineered Products and Ph. Eur. Chapter 5.2.12.

Antigen Details

Structure	Monomer
Distribution	Plasma FN (soluble dimeric form) is secreted by hepatocytes. Cellular FN (dimeric or cross-linked multimeric forms), made by fibroblasts, epithelial, and other cell types, is deposited as fibrils in the extracellular matrix.
Function	Fibronectins bind cell surfaces and various compounds including collagen, fibrin, heparin, DNA, and actin
Interaction	Cell surface, collagen, fibrin, heparin, DNA, and actin
Ligand/Receptor	Integrins $\alpha 5\beta 1$, $\alpha 4\beta 1$, $\alpha 4\beta 7$, $\alpha 9\beta 1$, $\alpha v\beta 3$; non-integrin receptors TLR-4, CD44, Syndecan-4, collagen, fibrin, heparin, DNA, and actin
Bioactivity	FN-1 supports the adhesion of mouse L929 cells.
Biology Area	Angiogenesis, Cancer Biomarkers, Cell Biology, Cell Motility/Cytoskeleton/Structure, Neuroscience Cell Markers

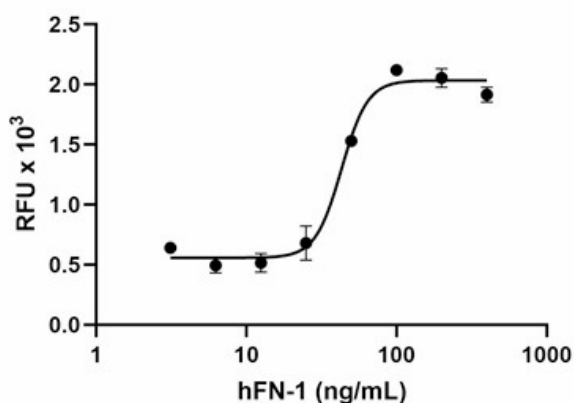
Antigen References

1. Schwarz-Linek U, *et al.* 2004. *Mol Microbiol.* 52:631.
2. Nagai Y, *et al.* 2006. *Immunity.* 24:801.
3. White ES, *et al.* 2008. *J. Pathol.* 216:1.
4. Adams JC, *et al.* 2015. *Cell Adh Migr.* 9:22.
5. Kraft S, *et al.* 2016. *J. Mol. Med.* 94:567.
6. Speziale P, *et al.* 2019. *Cells.* 8:1516.
7. Wirth F, *et al.* 2020. *Cells.* 9:2717.

Gene ID

[2335](#)

Product Data



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