

## Recombinant human vitronectin protein (Qk120)



**Type:** Stem cells

**Available for purchase:** Unit size (µg): 500, 5000

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### Product Information

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Vitronectin protein is widely used in stem cell culture. It provides a defined environment that supports the maintenance of [pluripotency](#) and is suitable for feeder-free culture, expansion, differentiation, and reprogramming of stem cells.

Qkine vitronectin is a high-purity [animal origin-free](#) recombinant protein with a molecular weight of 47.8 kDa. It is carrier-free and protein tag-free, ensuring exceptional lot-to-lot consistency and compatibility with translational studies and iPSC-based model production for screening. Qkine recombinant vitronectin protein is ultra high-purity with exceptionally low residual endotoxins making it suitable for the reproducible culture of stem cells, primary cells, [organoids](#), and use in sensitive neural differentiations.

**This protein is also available as GMP compliant [Cell Therapy Grade](#), to enquire email [ryan.weber@matriq.com](mailto:ryan.weber@matriq.com).**

**Have you tried our new QkPlate© human vitronectin coated 6 well plates ( [Qk2001](#))?**

### Alternative protein names

Truncated Vitronectin, VTN-N, S-protein, Serum-spreading factor, V75

### Product Size Wording

5000 µg will be dispatched as 10 x 500 µg

### Molecular weight

47.8 kDa (monomer)

### **Protein Uniprot number**

Highly pure recombinant human vitronectin protein (truncated) (UniProt: P04004)

### **Species reactivity**

- human
- species similarity:
- mouse - 74%
- rat - 76%
- bovine - 72%
- porcine - 74%

### **Product Information**

- >98%, by SDS-PAGE quantitative densitometry
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- Manufactured in our Cambridge, UK laboratories
- Lyophilized from PBS, mannitol and TCEP

### **Reconstitution instructions**

- Resuspend in sterile-filtered water at 1 mg/ml

### **Featured applications**

- Induced pluripotent and embryonic stem cell differentiation and maintenance
- Differentiation of human pluripotent stem cells towards extra-embryonic endoderm, mesenchymal, neural lineages, and chondrocytes
- Promotion of cell adhesion and migration
- Organoid growth and proliferation
- Stimulation of angiogenesis and vascular network development
- Fully defined, animal-free protocols for translational studies and preclinical stem cell production

### **Further quality assays**

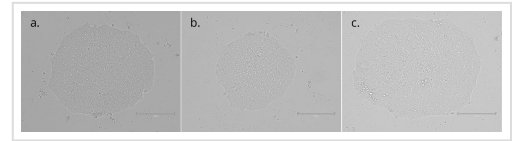
- Mass spectrometry: single species with expected mass

- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/μg protein

## Scientific Information

### Bioactivity

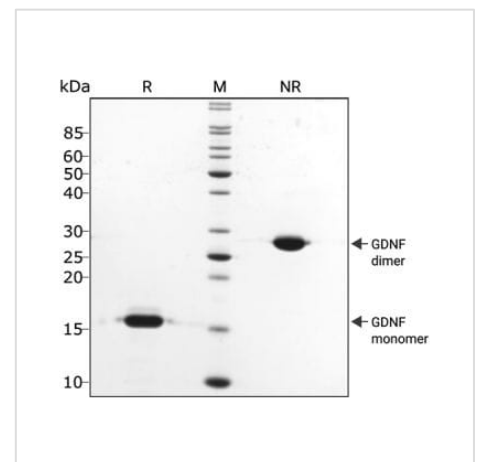
Imaging of iPSC colonies grown on Qkine vitronectin coated plates in E8-like media retained their highly preserved morphological appearance. (A) after initial seeding and 3 days in culture; (B) After 1 passage and 7 days in culture; (C) After 3 passages and 14 days in culture (scale bar = 150  $\mu\text{m}$ ). 6-well plates were coated with 5  $\mu\text{g}/\text{ml}$  Qk120 vitronectin protein lot #204660.



### Purity

#### Preparation of cell culture plates with Qkine ultra-high quality vitronectin (Qk120)

- Briefly centrifuge vial containing vitronectin Qk120 to ensure all lyophilized protein is collected at the bottom of the vial.
- Resuspend in 500 ml of MilliQ water to make a 1 mg/ml stock and lightly agitate the tube to ensure everything has fully reconstituted.
- Per 6-well plate required, dilute 30  $\mu\text{l}$  of the 1 mg/ml in 6 ml of phosphate buffered saline (PBS) without MgCl and CaCl to make 5  $\mu\text{g}/\text{ml}$  solution.
- Coat each well of 6-well plate with 1 ml per well of 5  $\mu\text{g}/\text{ml}$  vitronectin for at least two hours at 37°C.
- Adjust volume of 5  $\mu\text{g}/\text{ml}$  vitronectin per well for different area plate clusters.
  - 12-well plate add 500  $\mu\text{l}$
  - 24-well plate add 250  $\mu\text{l}$
  - 96-well plate add 100  $\mu\text{l}$
- Aliquot the remaining resuspended 1 mg/ml vitronectin into appropriately sized single use aliquots and store at -80°C.



Original product page: <https://ryan.calliope-alpha.ts.net/product/recombinant-human-vitronectin-protein-qk120/>

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