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Recombinant bovine vitronectin protein (Qk121)



Type: Stem cells

Available for purchase: Unit Size (µg): 500, 5000

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Product Information

Vitronectin is widely used in stem cell culture. It provides a defined environment than supports maintenance of pluripotency and is suitable for feeder-free culture, maintenance, differentiation, and reprogramming of stem cells.

Qkine bovine vitronectin is a high-purity animal origin-free recombinant protein with a molecular weight of 50.1 kDa. It is carrier-free and protein tag-free, ensuring exceptional lot-to-lot consistency. Qkine vitronectin is exceptionally high purity with industry-leading low residual endotoxins for highly reproducible culture of stem cells for cellular agriculture.

Qkine bovine vitronectin is also available as food grade with extended quality testing and documentation – Qk121-FG

Alternative protein names

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

Product Size Wording

5000 µg will be dispatched as 10 x 500 µg

Molecular weight

50.1 kDa (monomer)

Protein Uniprot number

Highly pure recombinant bovine vitronectin protein (UniProt: Q3ZBS7)

Species reactivity

- bovine

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

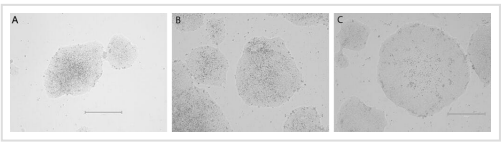
- Maintenance and expansion of bovine iPSC, ESC and primary cells
- Differentiation of human pluripotent stem cells towards extra-embryonic endoderm, mesenchymal, neural lineages, and chondrocytes
- Promotion of cell adhesion and migration
- Stimulation of angiogenesis and vascular network development
- Organoid growth and proliferation

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 human iPSC colonies grown in E8-like media retained their highly preserved morphological appearance. (A) after initial seeding and 3 days in culture; (B) After 1 passages and 7 days in culture; (C) After 3 passages and 14 days in culture (scale bar = 300 µm). 6-well plates were coated with Qk121 vitronectin (5 µg/ml) lot #204721.

Technote | Bovine vitronectin

Purity

Preparation of cell culture plates with Qkine ultra-high quality vitronectin (Qk121)

- Briefly centrifuge vial containing vitronectin Qk121 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 µl of the 1 mg/ml in 6 ml of phosphate buffered saline (PBS) without MgCl and CaCl to make 5 µg/ml solution.
- Coat each well of 6-well plate with 1 ml per well of 5 µg/ml vitronectin for at least two hours at 37°C.
- Adjust volume of 5 µg/ml vitronectin per well for different area plate clusters.
    - 12-well plate add 500 µl
    - 24-well plate add 250 µl
    - 96-well plate add 100 µl
- Aliquot the remaining resuspended 1 mg/ml vitronectin into appropriately sized single use aliquots and store at -80°C.

Original product page: https://qkine.com/product/recombinant-bovine-vitronectin-protein-qk121/

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