Technical Data Sheet

Recombinant porcine vitronectin protein

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Lot Specific Information

Lot Number: **Lot Specific***

Total Protein: **Lot Specific***

*This information will be noted on the certificate of analysis that ships with this product.

Shelf Life

This product has a guaranteed shelf-life of one year from the date of customer receipt when stored as recommended.

Product Information

Catalog Number:	**RP103**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Maintenance and expansion of porcine 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 Organoid growth and proliferation Stimulation of angiogenesis and vascular network development
Formulation:	Lyophilized, white powder
Endotoxin:	≤26.3 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in sterile-filtered water at 1 mg/ml. Once reconstituted, store in single-use aliquots to avoid freeze-thaw cycles. Store reconstituted protein at -20 °C to -80 °C for a maximum of 12 months or until the expiry date if sooner.
Sterility:	Sterile
Production:	Microbial. Expressed in E. coli
Molecular Weight:	50.4 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant porcine vitronectin protein is a multifunctional ~75 kDa glycoprotein of the extracellular matrix (ECM) and blood plasma, comprising an N-terminal somatomedin B domain that binds the urokinase receptor and stabilizes inactive PAI-1, a heparin-binding domain and hemopexin-like repeats that mediate interactions with integrins and other ECM components. By binding integrins such as αvβ3 and αvβ5, vitronectin activates PI3K/AKT and MAPK/ERK signaling to promote cell adhesion, migration, proliferation and survival, preventing anoikis, and it contributes to wound healing, fibrinolysis, immune regulation, angiogenesis and tumor metastasis. In cell culture, vitronectin is a coating substrate for epithelial, endothelial and certain cancer cells and a key component of defined, xeno-free systems for culture and maintenance of iPSCs and ESCs, and as a matrix scaffold it supports cell adhesion, clustering and organoid formation, including liver organoids. Vitronectin also enhances cell attachment on tissue-engineering scaffolds, prepares cells for cell therapy and compensates for serum adhesion factors in serum-free media, while recombinant production ensures batch-to-batch consistency, making it a key reagent for stem cell, organoid and regenerative medicine research. This protein is optimized for in vivo and functional applications: low-endotoxin, tag-free, and carrier-free, supporting reproducible performance in demanding preclinical and bioactivity studies. Species reactivity: porcine.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**
It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out

of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at https://bioxcell.com/faqs.

Store lyophilized protein between -20 °C and -80 °C until the date of expiry. Avoid freeze-thaw cycles

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