cyagen | OriCell

User Manual

OriCell™ Vitronectin Solution

Catalog No. VTNS-10001

We help you discover life

Introduction

Vitronectin (VTN) is a secreted glycoprotein synthesized in the liver that plays important roles in cell adhesion, migration, and survival. It promotes the attachment, spreading, and proliferation of endothelial cells, and supports the differentiation of various normal cells and cancer cell lines. Vitronectin is also widely used in cell migration studies. Together with fibronectin and laminin, vitronectin belongs to the family of cell adhesion proteins.

Through extensive research and continuous optimization, the OriCell™ R&D team has developed specialized supporting products suitable for the culture of most iPSCs (induced pluripotent stem cells). OriCell™ Vitronectin Solution has been rigorously validated across multiple iPSC lines. Following cell dissociation and reseeding, cells cultured with this solution exhibit high attachment rates, rapid recovery, and robust proliferation, ensuring maximal cell viability.

Extensive data have demonstrated that OriCell™ Vitronectin Solution is suitable for most commonly used iPSCs.

Note: **This product is intended for research use only and is not for diagnostic, therapeutic, clinical, household, or any other applications.**

When citing our products in academic publications, please use the following format: "OriCell™ [Product Name] + [Catalog Number], from Cyagen Biosciences."

Product Advantages

- Stable performance and simple operation.
- Suitable for most iPSCs.
- Supports efficient cell attachment, rapid recovery and robust proliferation.
- Effectively preserves the multipotent differentiation potential of iPSCs post-thaw.

QC

- Pass the detection of bacteria, fungi, mycoplasma, and endotoxins.
- Pass the detection of osmotic pressure and pH.
- Pass the detection of product quality.

Please refer to "COA" for details.

General Handling Principles

1. Maintain strict aseptic technique. Ensure the entire lab and operating areas are kept clean.
2. Follow standardized protocols. Adhere strictly to the instructions provided in the manual.
3. Ensure proper storage and use. Store the product according to specified conditions and use it promptly to ensure optimal performance.

Product Stability and Storage Conditions

- The product has a shelf life of 1 year when stored at -20 °C and protected from light.
- It is recommended to aliquot the solution into small volumes after the initial thaw to avoid repeated freeze-thaw cycles.
- Use the product within the shelf life. Do not use it after the expiration date.

Instructions for Use

Materials Required

- OriCell™ Vitronectin Solution (Cat. No.: VTNS-10001)
- Clean, sterile and high-quality disposable consumables (pipettes, pipette tips, centrifuge tubes, microcentrifuge tubes etc.)

Steps

1. Approximately 1–2 hours before use, remove the VTN solution from the -20 °C freezer and thaw it at 4 °C.
2. Prepare several sterile 1.5 mL microcentrifuge tubes within a biosafety cabinet or clean bench.
3. After thawing, aliquot the VTN solution according to single-use volumes based on your daily requirements. Store these aliquots at −20 °C and protect from light.
4. Dilute the VTN solution with PBS or basal medium according to the recommended volume as shown in the table below (1 μL/cm^2).

Culture Vessel	Surface Area (cm^2)	VTN Volume (μL)	Dilution Volume (mL)
12-well plate (per well)	4.5	5	0.6
6-well plate (per well)	9.6	10	1.5
6 cm culture dish	21	21	3.0
10 cm culture dish	55	55	8.0

5. Add the diluted VTN solution to the appropriate culture vessels.
6. Gently distribute the solution to ensure full coverage of the culture surface.
7. Place the coated culture vessels in a 37 °C incubator and incubate for 1 hour before use.
8. Before use, aspirate the VTN solution and immediately add the corresponding complete medium to proceed with cell seeding or other operations.