

# Vitronectin

## Product Manual

Catalog#RP01002 1 mg (2 mL)

### Product Introduction

Vitronectin (VTN Coating Protein) is a chemically defined, xenogeneic-free cell matrix that supports the growth and differentiation of human embryonic stem cells (hESCs) and human induced pluripotent stem cells (hiPSCs). It can be used in combination with NcEpic or NcTarget hPSC media (or mTeSR, E8).

### Product Information

**Table 1: VTN Coat Protein Product Description**

| Product   | Cat.No. | Amount      | Concentration | Storage          |
|---|---------|-------------|---------------|------------------|
| Vitronectin<br>Truncated VTN-NC<br>Purity ≥ 95%<br>Endotoxin content ≤ 25 EU/mg | RP01002 | 1 mg (2 mL) | 500 µg/mL     | -20 °C or -80 °C |

### Instructions for Use

The recommended coating concentration for Vitronectin is 1 µg/cm<sup>2</sup>. For example, a 6-well plate with a growth area of 10 cm<sup>2</sup> per well requires 10 µg of Vitronectin.

**Table 2: Recommended Amounts of VTN Working Solution (10 µg/mL) for Different Vessels**

| Container           | Area                     | Amount of VTN coat protein |
|---------------------|--------------------------|----------------------------|
| 6-Well Plate        | 10 cm <sup>2</sup> /well | 10 µg                      |
| 60-mm Culture Dish  | 20 cm <sup>2</sup>       | 20 µg                      |
| 100-mm Culture Dish | 60 cm <sup>2</sup>       | 60 µg                      |
| T-25 Culture Flask  | 25 cm <sup>2</sup>       | 25 µg                      |

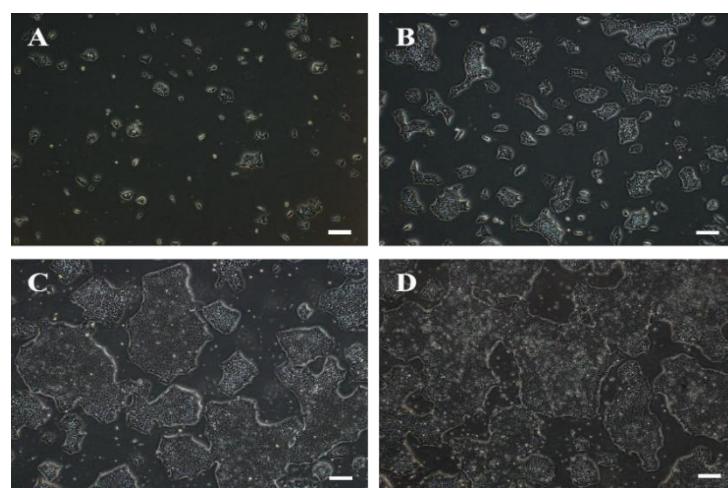
According to Table 2, a 6-well plate has a total area of 60 cm<sup>2</sup>, and 60 µg of **Vitronectin** coating protein is required for coating, which equals 120 µL (500 µg/mL). The **Vitronectin** coating protein can be aliquoted into 120 µL (60 µg) per tube and stored at -20 °C or -80 °C. When needed, take one tube of **Vitronectin** coating protein (120 µL, 60 µg), dilute it with DMEM/F12 medium to make the working solution, and use it to coat one 6-well plate.

## Coating Culture Plates (Using a 6-Well Plate as an Example. The Same Procedure Applies to Other Vessels.)

1. Thaw one vial of **Vitronectin** (120  $\mu$ L, 60  $\mu$ g) at room temperature (15–25 °C).
2. Prepare a 15 mL centrifuge tube. Add 9 mL of DMEM/F12 medium and then transfer the thawed **Vitronectin** into the medium. Gently mix to dilute. Do not vortex.
3. Use the diluted **Vitronectin solution** immediately for coating. Apply 1.5 mL per well for a 6-well plate.
4. Gently tilt the plate to ensure the solution fully covers the bottom surface of each well.
5. Incubate at room temperature (15–25 °C) for at least 1 hour before use.

**Tips: If not used immediately, seal the plate to prevent evaporation. Store coated plates at 4 °C and use within 1 week. Before use, bring the plate to room temperature (15–25 °C) for 10–30 minutes.**

6. Before seeding cells, tilt the plate and aspirate the coating solution using a pipette tip. Ensure the coated surface is intact without scratches. Do not rinse or add additional solutions.



**Morphology of hiPSCs under NcEpic™ hPSC Medium conditions on vitronectin-coated plates.**

**Panels A, B, C, and D show the morphology of hiPSCs on Days 1, 2, 3, and 4 of culture, respectively.**

**Scale bar: 200  $\mu$ m.**