Rat Tail Collagen Type I

Cat. No : PB180644

Size: 1mL

General Information

Ingredient Name	Rat Tail Collagen Type I (1 mg/mL)
Product Form	Liquid
Specifications	1mL
Concentration	1 mg/mL
Recommended working concentration	12 μg/mL
Storage conditions and expiration dates	-5~-20℃,12 months

Ingredient Name	Rat Tail Collagen Type I (1 mg/mL) Dedicated Dilution Buffer (10×)
Product Form	Liquid
Specifications	10mL
Concentration	0.06 mol/L
Recommended working concentration	0.006 mol/L
Storage conditions and expiration dates	-5~-20℃,12 months
Working Solution Volume	100 mL

Note: The recommended concentration for surface coating of cell culture vessels is 1-5 μg/cm².

Background

Rat Tail Collagen Type I (also known as: Collagen Type I, Collagen I) is a specialized coating reagent for cell culture. It effectively resolves adhesion challenges for difficult-to-attach cell lines including PC-12 (undifferentiated), MCF-7 and others, preventing growth abnormalities caused by poor attachment. This product is intended exclusively for surface coating of cell culture vessels.

This product is derived from the tail of SD rats, with a concentration of 1 mg/mL (dissolved in 0.006 mol/mL acetic acid solution).

Note: This product includes complimentary 10× dedicated dilution buffer for Rat Tail Collagen Type I (1 mg/mL), with a concentration of 0.06 mol/L.

Guidelines for use

1. Diluting the "Dedicated Dilution Buffer" 10-fold with sterile water to obtain 0.006 mol/L acetic acid solution.
2. For a coating concentration of 2 μg/cm², diluting the "Type I Rat Tail Collagen (1 mg/mL)" to 12 μg/mL using the prepared 0.006 mol/L acetic acid solution.
3. In the ultra-clean bench, using a pipette to suck up 12 μg/mL of rhamnogelatin type I 1 mL~2 mL, and adding it into the T25 culture flask, and gently shaking the culture flask to make sure that the bottom is fully covered with liquid.
4. Securely capping the culture flask and transferring to 37°C incubator for coating for1-2 hours or longer.
5. Removing the culture flask, sucking out the excess rat tail collagen type I (may be retained for single reuse; repeated use increases contamination risk and reduces coating efficacy).

6. Securely capping the culture flask and transferring to either a 37°C incubator or 4°C refrigerator while maintaining sterility.
7. Incubating at 37°C for ≥4 hours or at 4°C for ≥24 hours until the culture flask bottom is completely dry and free of liquid.
8. Coated culture flasks remain effective for 3-7 days when stored at ambient temperature in a biosafety cabinet or at 4°C. For optimal results, use within 3 days, as prolonged storage may compromise coating efficacy.
9. Removing the encapsulated culture flask and washing it with PBS or culture medium 3 times in the ultra-clean bench.
10. Using the culture flask for normal inoculation.

Notes

1. The volume of coating solution required varies by culture vessel type, with the minimum amount needed to completely cover the growth surface (while preventing drying during the coating process).

Culture vessel	12 μg/mL Rat Tail Collagen Type I (For reference only)
Single well in 12 well-plate	0.5 mL
Single well in 6 well-plate	0.8 mL
6 cm culture dish	1-1.5 mL
10 cm culture dish	3 mL
T25 culture flask	1-1.5 mL
T75 culture flask	3-4 mL

2. The Rat Tail Collagen Type I solution may exhibit low cytotoxicity. Therefore, coating culture vessels must be rinsed three times with PBS or culture medium prior to use.
3. The coating process consists of two phases: the coating time and drying time. The coating time refers to the adsorption period of the coating solution, for which following the recommended duration is sufficient - prolonged exposure does not enhance effectiveness.The drying time refers to the period for air-drying the coated culture vessels, which ensures complete evaporation of the coating solution and achieves improved adhesive binding efficacy.
4. All of the above operations are based on the premise of sterile reagents and consumables and operating in a sterile environment.