

L7™ hPSC Matrix

Technical Information & Instructions

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I. Introduction

Lonza's recombinant hPSC Matrix™ is xeno-free and defined. When used in conjunction with L7™ hPSC BulletKit™ Medium, it is proven to support efficient attachment, maintain pluripotency and stable karyotype for over 40+ passages in multiple hPSC lines.

II. Quality Control

Test	Specification
Authenticity	Verified by N-terminal and Mass Spectrometry analysis
Purity	≥95% by SDS-PAGE gel and HPLC analyses
Endotoxin	<1 EU/μg
Protein Content	Verified by UV Spectroscopy and/or SDS-PAGE gel

III. Unpacking and Storage Instructions

1. Check container for leakage or breakage.
2. L7 hPSC Matrix™ is stable at -20°C to -80°C until the expiration date indicated on the label. L7™ hPSC Matrix should be stored dry and protected from light until ready for use. Once reconstituted to the stock solution, the L7™ hPSC Matrix Stock Solution is stable at -20°C to -80°C for up to three months. Avoid repeated freeze-thaw cycles.

IV. Preparation of L7™ hPSC Matrix Stock Solution

1. Remove vial of L7™ hPSC Matrix from -20°C to -80°C and briefly centrifuge to collect powder at the bottom of the vial.
2. Create L7™ hPSC Matrix Stock Solution by adding 1.0 ml cell culture grade water (Lonza Catalog No. 17-724F, or similar) to the vial of L7™ hPSC Matrix. Gently swirl to mix.

NOTE: L7™ hPSC Matrix Stock Solution must be further diluted to L7™ hPSC Matrix Working Solution immediately prior to coating vessels.

3. Immediately aliquot L7™ hPSC Matrix Stock Solution and store at -20°C to -80°C for up to three months. Avoid repeated freeze-thaw cycles. For guidance on selecting the appropriate size aliquot volumes, please see Table 1 in Section V (Coating Culture Vessels, Page 2) for a listing of

required L7™ hPSC Matrix Stock Solution volumes for various commonly used culture vessels.

V. Coating Culture Vessels

1. When ready to plate, thaw an aliquot of the L7™ hPSC Matrix Stock Solution at room temperature.
2. Dilute the L7™ hPSC Matrix Stock Solution 1:100 with 1X DPBS (Lonza Catalog No. 17-513F, or similar) to create L7™ hPSC Matrix Working Solution (i.e. add 0.1 ml L7™ hPSC Matrix Stock Solution to 9.9 ml of DPBS to create 10.0 ml of L7™ hPSC Matrix Working Solution).

Table 1. L7™ hPSC Matrix Solution Required for Common Culture Vessels

Culture Surface	Surface Area	L7™ hPSC Matrix Stock Solution Needed*	L7™ hPSC Matrix Working Solution Needed
6-well plate	10 cm ² /well	10 µl per well	1 ml per well
12-well plate	4 cm ² /well	4 µl per well	400 µl per well
24-well plate	2 cm ² /well	2 µl per well	200 µl per well
35-mm dish	8 cm ²	8 µl per dish	800 µl per dish
60-mm dish	21 cm ²	21 µl per dish	2.1 ml per dish
100-mm dish	55 cm ²	55 µl per dish	5.5 ml per dish
T-25 Flask	25 cm ²	25 µl per flask	2.5 ml per flask
T-75 Flask	75 cm ²	75 µl per flask	7.5 ml per flask

*L7™ hPSC Matrix Stock Solution must be further diluted to L7™ hPSC Matrix Working Solution immediately prior to coating vessels.

3. Using pipette tips, add 1.0 ml of L7™ hPSC Matrix Working Solution per every ten square centimeter of culture surface area (i.e. 2.5 ml of L7™ hPSC Matrix Working Solution per T-25 flask or 7.5 ml of L7™ hPSC Matrix Working Solution per T-75 flask).
4. Tilt the culture vessel from side to side to ensure complete coverage of surface area.

NOTE: L7™ hPSC Matrix Working Solution is clear which may make distinguishing coated wells from uncoated wells difficult. To avoid this issue, mark each well with indelible ink when the L7™ hPSC Matrix Working Solution is added to the well.

5. Incubate the vessels in a 37°C±1°C, 5% CO₂, 90%±2% humidity incubator for at least one hour.

NOTE: Overnight incubation for next day use is acceptable, however, leaving the vessel at 37°C longer than 48 hours is not recommended. Vessels that have been coated at 37°C may be stored at 4°C for up to one week when properly wrapped to prevent evaporation. Pre-warm all coated vessels stored at 4°C to room temperature prior to plating cells.

6. Immediately prior to plating cells, aspirate the remaining L7™ hPSC Matrix Working Solution using a sterile pipette.

VI. Ordering Information

Cat. No.	Product	Description
FP-5020	L7™ hPSC Matrix	Sufficient for coating up to 1,000 cm ² of culture vessel surface area (1.0 mg)

VII. Related Products

Cat. No.	Product	Description
FP-5007	L7™ hPSC BulletKit™ Medium	500 ml L7™ hPSC Basal Medium plus FP-5207 supplement to formulate L7™ hPSC Medium (growth medium)
FP-5107	L7™ hPSC Basal Medium	L7™ human pluripotent stem cell basal medium (500 ml)
FP-5207	L7™ hPSC Supplement	Formulates 500 ml of L7™ hPSC Basal Medium to L7™ hPSC Growth Medium (5 ml)
FP-5002	L7™ hPSC Cryosolution	50 ml
FP-5013	L7™ hPSC Passaging Solution	100 ml

When placing an order or for Scientific Support, please refer to the product numbers and descriptions listed above. For a complete listing of all Clonetics™ Products, refer to the Lonza website or the current Lonza catalog. To obtain a catalog, additional information or want to speak with Scientific Support, you may contact Lonza by web, e-mail, telephone, fax or mail (See page 1 for details).

THESE PRODUCTS ARE FOR RESEARCH USE ONLY. Not approved for human or veterinary use, for application to humans or animals, or for use in clinical or *in vitro* diagnostic procedures.

WARNING: PRODUCTS CONTAIN HUMAN SOURCE MATERIAL, TREAT AS POTENTIALLY INFECTIOUS. All human-sourced products should be handled at the biological safety level 2 to minimize exposure of potentially infectious products, as recommended in the CDC-NIH manual, [Biosafety in Microbiological and Biomedical Laboratories](#), 5th ed. If you require further information, please contact your site safety officer or Scientific Support.

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