

MesenCult™-SF Attachment Substrate



Serum-free attachment substrate for human mesenchymal stem cells

Catalog # 05424

5 mg

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Product Description

MesenCult™-SF Attachment Substrate is a serum-free substrate for the in vitro culture of human mesenchymal stem and progenitor cells (MSCs). Components of MesenCult™-SF Attachment Substrate are pre-screened and tested for optimal cell adherence when cells are cultured with MesenCult™-XF Medium (Catalog #05420). The substrate supports both expansion of human MSCs in vitro as well as their enumeration using the colony-forming unit-fibroblast (CFU-F) assay. MesenCult™-SF Attachment Substrate is included in MesenCult™-SF Culture Kit (Catalog #05429).

Properties

Storage: Store at 2 - 8°C.

Shelf Life: Stable until expiry date (EXP) on label.

This product contains material derived from human plasma. Donors have been tested and found negative for HIV-1 and -2, hepatitis B, and hepatitis C prior to donation. However, this product should be considered potentially infectious and treated in accordance with universal handling precautions.

Handling / Directions For Use

1. Dissolve the lyophilizate with 5 mL sterile tissue grade water to obtain a final concentration of 1 mg/mL. Do not agitate or pipette vigorously.
2. Incubate at 37°C for 30 - 60 minutes to ensure the lyophilizate is fully in solution. Swirl gently.
NOTE: If not used immediately, store solution at -20°C. It is recommended to aliquot the reconstituted solution into multiple vials (e.g. 500 µL). Avoid repeated freeze-thaw cycles.
3. Coat plates one day prior to use (i.e. coat overnight at 2 - 8°C), or, if time is limited, coat for 2 hours at room temperature (15 - 25°C). It is recommended to coat plates overnight.
4. Plates must be coated with different dilutions of MesenCult™-SF Attachment Substrate when performing CFU-F assays and when expanding cells in culture, as follows:
COATING PLATES FOR CFU-F ASSAY
Dilute MesenCult™-SF Attachment Substrate 1 in 30 in D-PBS (Without Ca++ and Mg++; Catalog #37350). Gently mix. Prepare an amount slightly more than required to account for pipetting variability. For example, to coat one 6-well plate, dilute 160 µL MesenCult™-SF Attachment Substrate in 4.8 mL PBS.
COATING PLATES FOR EXPANSION
When culturing cells obtained from primary tissue:
Dilute MesenCult™-SF Attachment Substrate 1 in 20 in D-PBS (Without Ca++ and Mg++; Catalog #37350). Gently mix by inverting the tube twice. Prepare an amount slightly more than required to account for pipetting variability. For example, to coat one T-75 cm2 flask, dilute 250 µL MesenCult™-SF Attachment Substrate in 5 mL PBS.
When culturing previously cultured cells:
Dilute MesenCult™-SF Attachment Substrate 1 in 28 in D-PBS (Without Ca++ and Mg++; Catalog #37350). Gently mix by inverting the tube twice. Prepare an amount slightly more than required, to account for pipetting variability. For example, to coat one T-75 cm2 flask, dilute 185 µL MesenCult™-SF Attachment Substrate in 5 mL PBS.
5. Add diluted MesenCult™-SF Attachment Substrate (step 4) as follows:
 - 6-well plate: 800 µL per well
 - T-25 cm2 flask: 2 mL per flask
 - T-75 cm2 flask: 5 mL per flask
6. Wrap plates with Parafilm®, sealing the junction between the base and lid and incubate at 2 - 8°C overnight, or at room temperature (15 - 25°C) for 2 hours. For flasks, seal the vent on the cap with Parafilm® and incubate as described.

7. If plates/flasks were incubated overnight at 2 - 8°C, bring to room temperature (15 - 25°C; approximately 20 minutes) prior to washing. Gently pipette off remaining MesenCult™-SF Attachment Substrate without touching the newly coated surface.
8. Wash plates/flasks once with sterile distilled water by slowly pipetting water down the side of the well/flask, being careful not to scrape the coated surface. Swirl gently to rinse the entire surface and then carefully aspirate the water.
9. Allow to dry at room temperature (15 - 25°C) for at least 15 minutes prior to use.
10. For more information on using MesenCult™-SF Attachment Substrate and on culturing human MSCs with MesenCult™-XF Medium, refer to the Technical Manual: Culture of Human Mesenchymal Stem Cells Using MesenCult™-XF Medium (Document #29184) available at www.stemcell.com or contact us to request a copy.

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