CellAdhere™ Laminin-521

Matrix for maintenance of human ES and iPS cells in combination with mTeSR™1, mTeSR™ Plus, TeSR™E8™, or TeSR™2

Catalog #77003  100 µg
77004  10 x 100 µg
200-0117  500 µg

Product Description

CellAdhere™ Laminin-521 is a defined, xeno-free cell culture matrix that supports the long-term maintenance of human embryonic stem (ES) cells and induced pluripotent stem (iPS) cells in feeder-free conditions. Using CellAdhere™ Laminin-521 as a cell culture matrix increases single-cell attachment and survival compared to other matrices and does not require the addition of apoptotic inhibitors during plating (See Notes and Tips). When used with mTeSR™1 (Catalog #85850), mTeSR™ Plus (Catalog #05825), TeSR™2 (Catalog #05860), or TeSR™E8™ (Catalog #05980), the system allows complete control over the culture environment, resulting in consistent cell populations and reproducible results in downstream applications.

Properties

Storage:  Store at -20°C.
Shelf Life:  Stable until expiry date (EXP) on label.
Contains:  A 100 µg/mL solution of recombinant protein composed of entirely human sequences.

Directions for Use

COATING CULTUREWARE WITH CELLADHERE™ LAMININ-521

Use sterile technique when coating cultureware with CellAdhere™ Laminin-521.

1. Thaw CellAdhere™ Laminin-521 at 2 - 8°C before use.

   NOTE: If not used immediately, store at 2 - 8°C for up to 3 months.

2. Dilute CellAdhere™ Laminin-521 in Dulbecco’s phosphate-buffered saline with Ca++ and Mg++ to a final concentration of 5 - 10 µg/mL.

   NOTE: The required concentration of CellAdhere™ Laminin-521 can be cell-dependent and should be optimized for each application. When adapting to the new culture matrix, cells may benefit from a higher concentration of CellAdhere™ Laminin-521 for the first few passages.


4. Immediately add diluted CellAdhere™ Laminin-521 to cultureware. See Table 1 for recommended coating volumes.

5. Gently rock the cultureware back and forth to spread the CellAdhere™ Laminin-521 solution evenly across the entire surface.

6. Seal the cultureware to prevent evaporation of the CellAdhere™ Laminin-521 solution (e.g. with Parafilm®). Incubate at 2 - 8°C overnight. If a more rapid coating is required, incubate at 37°C for at least 2 hours before use.

   NOTE: If not used immediately, the cultureware can be stored at 2 - 8°C for up to 4 weeks after coating. Do not allow the culture surface to dry, as the matrix will become inactivated.

7. Aspirate CellAdhere™ Laminin-521 when cells are ready to be plated.

   NOTE: The coating does not require washing before use.

Table 1. Recommended Volumes for Coating Cultureware with CellAdhere™ Laminin-521

<table>
<thead>
<tr>
<th>CULTUREWARE</th>
<th>VOLUME OF DILUTED CellAdhere™ Laminin-521</th>
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</thead>
<tbody>
<tr>
<td>12-well plate</td>
<td>0.5 mL/well</td>
</tr>
<tr>
<td>6-well plate</td>
<td>1 mL/well</td>
</tr>
<tr>
<td>T-25 cm² flask</td>
<td>3 mL/flask</td>
</tr>
<tr>
<td>T-75 cm² flask</td>
<td>8 mL/flask</td>
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</tbody>
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Notes and Tips

Although it is possible to passage human ES and iPS cells as single cells, this can result in selective pressure that could lead to genetic aberrations. If passaging as single cells, check the karyotype frequently.

References


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