Human Transforming Growth Factor - beta 1
Produced in CHO
Cell Culture Tested

Product Code: TC299

Product Description:

Source: CHO cells
Molecular Weight: 25.0kDa

Synonyms: Recombinant Human TGF-β1, Differentiation inhibiting factor, Cartilage-inducing factor

Amino Acid Sequence:
ALDTNYCFSS TEKNCCVRQL YIDFRKDLGW
KWIHEPKGYH ANFCLGPCPY IWSLDTQYSK
VLALYNQHNP GASAAPCCVP QALEPLPIVY
YVGRKPKVEQ LSNMIVRSCK CS

Transforming Growth Factors β (TGF-βs) are multifunctional growth modulators implicated in several physiological processes which include embryogenesis, inflammation, wound healing, immuno-suppression, carcinogenesis, cellular differentiation and tissue remodeling. They are highly stable molecules and are expressed by almost all cell types in small quantities. They also regulate cell proliferation, growth, differentiation and motility as well as synthesis and deposition of the extracellular matrix.

Recombinant human TGF-β1 is a 25.0 kDa protein composed of two identical 112 amino acid polypeptide chains linked by as single disulfide bond.

Directions:

Formulation: Sterile filtered through 0.22µ filter. Lyophilized with no additives.

Directions for use:

1. Centrifuge the vial prior to opening.
2. Reconstitute in water to a concentration of 0.1-1.0 mg/ml.
3. Do not vortex.
4. The solution can be stored at 2°-8°C for up to 1 week.
5. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (for e.g. 0.1% bovine serum albumin) and store in working aliquots at -20° to -80°C.

Quality Control:

Solubility
Soluble at 0.1-1.0mg/ml in sterile tissue culture grade water

Assay (by SDS-PAGE and HPLC)
NLT 98%

Cell Culture Test
Passes

Endotoxin Content
NMT 1EU/µg

Specific Activity
Determined by TGF-B1’s ability to inhibit the mouse IL-4-dependent proliferation of mouse HT-2 cells. The expected ED50 is ≤0.05ng/ml, corresponding to a specific activity of ≥2x10⁷ units/mg

Storage and Shelf Life:

Shelf life of TGF depends on the storage temperature and the form in which it is stored.

Please refer the disclaimer overleaf
Please refer the table for recommended storage time of different forms of TGF at different storage temperatures.

<table>
<thead>
<tr>
<th>Product form</th>
<th>Temperature</th>
<th>Storage time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyophilized</td>
<td>-20°C to -80°C</td>
<td>See expiry date given on the product label</td>
</tr>
<tr>
<td></td>
<td>4°C</td>
<td>6 months</td>
</tr>
<tr>
<td></td>
<td>RT</td>
<td>1 month</td>
</tr>
<tr>
<td>Diluted as per directions</td>
<td>-20°C-80°C</td>
<td>10 months</td>
</tr>
<tr>
<td></td>
<td>2°C - 8°C</td>
<td>1 week</td>
</tr>
</tbody>
</table>

Once reconstituted, aliquot the solution into the smaller volumes and freeze for future use. Repeated freezing and thawing of the reconstituted frozen solution should be avoided to retain potency of the growth factor.

Disclaimer:
User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt. Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.

HiMedia Laboratories Pvt. Ltd. A-516, Swastik Disha Business Park, via Vadhani Ind. Est., LBS Marg, Mumbai-400086, India. Customer care No.: 022-6147 1919 Email: info@himedialabs.com