

Recombinant Human Transforming Growth Factor - beta 1

#R00150

Size: 5 µg/100 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

TGF-beta 1 (transforming growth factor beta 1) is one of three closely related mammalian members of the large TGF-beta superfamily that share a characteristic cystine knot structure. TGF-beta 1, -2 and -3 are highly pleiotropic cytokines that are proposed to act as cellular switches that regulate processes such as immune function, proliferation and epithelial-mesenchymal transition. Each TGF-beta isoform has some non- redundant functions; for TGF-beta 1, mice with targeted deletion show defects in hematopoiesis and endothelial differentiation, and die of overwhelming inflammation. TGF- beta is activated from latency by pathways that include actions of the protease plasmin, matrix metalloproteases, thrombospondin 1 and a subset of integrins. Mature human TGF- beta 1 shares 100% aa identity with pig, dog and cow TGF- beta 1, and 99 % aa identity with mouse, rat and horse TGF- beta 1.

AA Sequence

Ala279-Ser390;Accession#P01137

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile 4 mM HCl to a concentration of 0.1 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriately buffered solutions.

Product Specification

Species	Human
Source	CHO Cells
Molecular Weight	Apparent molecular mass of 24 kDa in SDS-PAGE under non-reducing conditions, 12 kDa under reducing conditions, a disulfide-linked homodimer of two 112 amino acid glycosylated polypeptide chains.
Purity	> 97 % by SDS-PAGE analyses.
Biological Activity	Measured by its ability to inhibit the IL-4-dependent proliferation of HT- 2 mouse T cells. The ED ₅₀ for this effect is 0.04-0.2 ng/mL. The specific activity of rHuTGF-β1 is approximately 2.5 × 10 ⁴ U/µg, which is calibrated against human TGF-β1

Standard.

**Physical
Appearance** Sterile Filtered White lyophilized
(freeze-dried) powder.

Formulation Lyophilized from 0.2 µm filtered
concentrated solution in 35 %

Acetonitrile and 0.1 % TFA.

Endotoxin Less than 0.1 EU/µg of
rHuTGF-β1 as determined by
LAL method.
