

TGF-beta1, human recombinant protein (CHO cells)

Information

Gene ID	7040
Accession #	P01137
Alternate Names	TGFB1, Human TGF-beta1, TGF-beta1, TGF beta1, TGFbeta1, h-TGF-beta1, rh-TGF-beta1, recombinant human TGF-beta1, recombinant TGF-beta, TGF.
Source	<i>Chinese Hamster Ovary cell line, CHO</i>
M.Wt	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.
AA Sequence	Ala279-Ser390
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
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.
Formulation	Lyophilized from 0.2 µm filtered concentrated solution in 35 % Acetonitrile and 0.1 % TFA.
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.
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.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	5 µg	100 µg
TGF-beta1, human recombinant protein (CHO cells)	5 µg	100 µg

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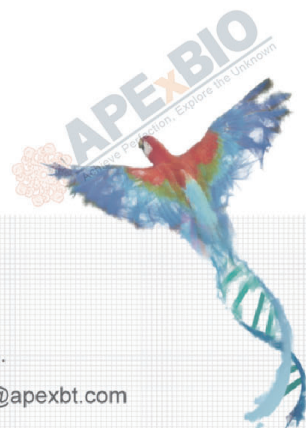
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- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
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Quality Control

Purity	> 97 % by SDS-PAGE analyses.
Endotoxin	Less than 0.1 EU/μg of rHuTGF-β1 as determined by LAL method.

Description

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.



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