

Human TGF-beta1 (glycosylated, CHO)

Human Transforming growth factor beta-1 recombinant

Synonyms: Transforming growth factor beta-1, TGF-beta-1, TGF- β 1, CED, DPD1, TGFB, TGF-b 1, LAP, TGFB1.

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
2 μ g	1935.954.002		
10 μ g	1935.954.010		
50 μ g	1935.954.050		
100 μ g	1935.954.100		
500 μ g	1935.954.500		
1 mg	1935.954.199		

Please enquire for bulk quantities and other vial sizes

Description

Recombinant Human Transforming Growth Factor beta-1 (TGF-beta-1) produced in CHO cells is a glycosylated homodimeric polypeptide chain containing 2x112 amino acids with a total molecular mass of 25.6kDa. Transforming Growth Factor-beta-1 (TGF-beta1) is a member of the TGF superfamily (Activin, BMP, GDF, TGF-beta) of homologous, disulfide-linked, homodimer proteins that regulate the proliferation and differentiation of normal and transformed cells. Recombinant human TGF-beta-1 β 1 is used for the cultivation of embryonic stem cells and induced pluripotent stem cells. It promotes Th17 and Treg differentiation of T cells. The three mammalian isoforms TGF-beta-1, TGF-beta-2 and TGF-beta-3, signal through the same receptor and elicit similar biological responses. TGF-beta-1 is the most abundant isoform secreted by almost every cell type. All TGF-beta isoforms are involved in various physiological processes, including embryogenesis, tissue remodeling and wound healing. They are secreted predominantly as latent complexes, which are stored at the cell surface and in the extracellular matrix. The release of the biologically active TGF-beta isoform from a latent complex involves proteolytic processing of the complex and/or induction of conformational changes by proteins such as Thrombospondin-1 (order number: 4070.952.xyz).

- **Biological Activity** $\geq 2 \times 10^7$ units/mg
- **Source** CHO
- **Purity** $\geq 95\%$ (SDS-PAGE)
- **Endotoxin level** ≤ 0.1 ng/ μ g (≤ 1 EU/ μ g)
- **Stabilizer** None
- **Buffer** Sodium Citrate (pH 3.5)*
- **Physical state** Sterile filtered, lyophilized

Biological Activity

The ED₅₀ of ≤ 0.05 ng/ml was determined by the dose-dependent inhibition of IL-4-induced proliferation of HT-2 cells, it corresponds to a specific activity of $\geq 2 \times 10^7$ units/mg.

Reconstitution

We recommend a quick spin followed by reconstitution in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. To prepare aliquots we recommend to further dilute into a buffer containing a carrier protein (e.g. 0.1% HSA ultra pure 2835.958.188) and store in working aliquots at -20°C to -80°C. Working aliquots should be at the highest possible concentration.

Stability

Lyophilized TGF-beta 1 is stable at room temperature for up to 3 weeks and at least until the expiry date if it is stored desiccated below -20°C. Upon reconstitution TGF-beta-1 can be stored at 4°C for 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). **Please avoid repeated freeze-thaw cycles.**

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

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Amino Acid Sequence

ALDTNYCFSS TEKNCCVRQL YIDFRKDLGW KWIHEPKGYH ANFCLGPCPY IWSLDTQYSK VLALYNQHNP
GASAAPCCVP QALEPLPIVY YVGRKPKVEQ LSNMIVRSCK CS

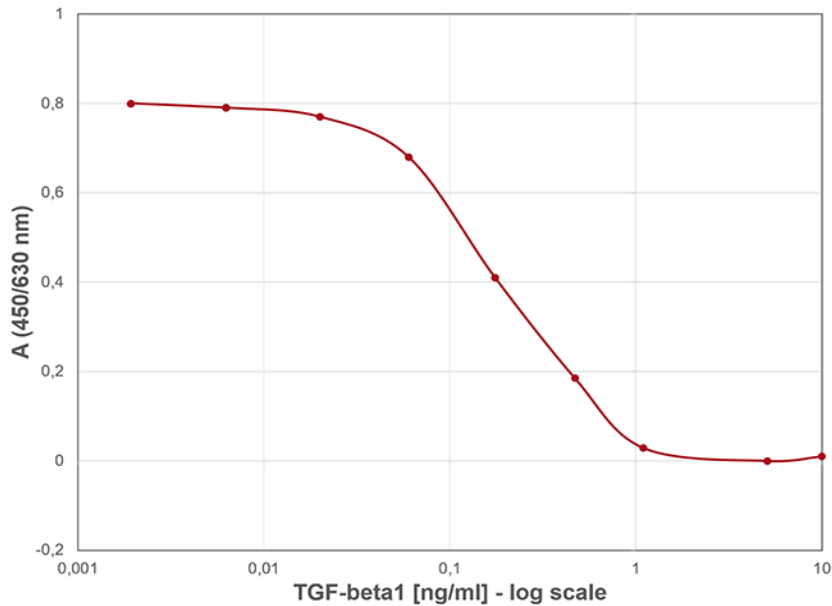
Biological Activity of Human TGF-beta1 (glycosylated, CHO)

Fig. 1: TGF-beta1 dose dependent inhibition of murine IL-4-induced proliferation of mouse HAT-2 cells. Values are the means of triplicate determinations.

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

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