



TECHNICAL DATA SHEET

Human TGF-beta1

Human Transforming Growth Factor-beta1, recombinant

Synonyms: Differentiation inhibiting factor, Cartilage-inducing factor

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date*
5µg	W 1935954005	3506073540	May 2011

Description

Recombinant human Transforming Growth Factor-beta 1 (TGF-b1) is a 25.0 kDa protein composed of two identical 112 amino acid polypeptide chains linked by a single disulfide bond. The three mammalian isoforms of TGF-beta, TGF-beta1, -beta2, -beta3, signal through the same receptor and elicit similar biological responses. They are multifunctional cytokines that regulate cell proliferation, growth differentiation and motility as well as synthesis and deposition of the extracellular matrix. They are involved in various physiological processes including embryogenesis, tissue remodelling and wound healing. They are secreted predominantly as latent complex which are stored at the cell surface and in the extracellular matrix. The release of 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. TGF-beta1 is the most abundant isoform secreted by almost every cell type. It was originally identified for its ability to induce phenotypic transformation of fibroblasts and recently it has been implicated in the formation of skin tumors.

- **Biological activity** $\geq 2 \times 10^7$ units/mg
- **Source** CHO-Cells
- **Purity** $\geq 98\%$ (SDS-PAGE, HPLC)
- **Endotoxin level** $\leq 0.1 \text{ ng}/\mu\text{g}$ ($\leq 1 \text{ EU}/\mu\text{g}$)
- **Stabilizer** None
- **Buffer** Sodium Citrate (pH 3.5)
- **Physical state** Sterile filtered, lyophilized

Biological activity

The ED_{50} of $\leq 0.05 \text{ ng/ml}$ was determined by TGF-beta 1's ability to inhibit the mouse IL-4-dependent proliferation of mouse 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 10mM Citric Acid pH 3.0 to a concentration of 50µg/ml (e.g., 5µg/100µl). This solution can then be stored at room temperature or at 4°C for 1 month. It is recommended that further dilutions be made in PBS containing 2 mg/ml albumin and stored at -20°C for future use.

Stability

The lyophilized protein is stable for at least 2 years from date of receipt at -20°C. Reconstituted TGF-beta 1 is stable for at least 3 months when stored in working aliquots with a carrier protein at -20°C. **Please avoid repeated freeze/thaw cycles.**

Usage

FOR RESEARCH USE ONLY

NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES

* For lyophilized product if stored as indicated. Please contact our technical support if the product has expired.

Biochrom AG, Leonorenstr. 2-6, 12247 Berlin

Phone: +49 30 77 99 06-92

Fax: +49 30 771 00 12

Email: info@biochrom.de

<http://www.biochrom.de>