

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	W1935954005	3509093541	October 2014

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** ≥ 98 % (SDS-PAGE, HPLC)
- **Endotoxin level** ≤ 0.1 ng/µg (≤ 1 EU/µg)
- **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 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 Citric Acid (10mM; pH 3.0) to a concentration of 0.1-1.0 mg/ml. *Do not vortex*. This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

Stability

The lyophilized protein is stable at room temperature for up 1 month. Working aliquots stored with a carrier protein are stable for at least 10 months at -20°C to -80°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.

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