

### ★ Storage

Lyophilized TGFβ1 although stable at room temperature for 3 weeks, should be stored desiccated below 18°C. Upon reconstitution TGFβ1 Human should be stored at 4°C between 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 prevent freeze-thaw cycle.

### ☞ Contents

- Product Manual
- Transforming Growth Factor beta 1

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### ★ Introduction

Transforming growth factor beta (TGFβs) mediate many cell-cell interactions that occur during embryonic development. Three TGFβs have been identified in mammals. TGFβ1, TGFβ2, and TGFβ3 are each synthesized as pre-cursor proteins that are very similar in that each is cleaved to yield a 112 amino acid polypeptide that remains associated with the latent portion of the molecule.

### ★ Description

TGF-β 1 Human Recombinant produced in *E.Coli* is a single, non-glycosylated, polypeptide chain containing 113 amino acids (279-390 a.a.) and having a total molecular mass of 12.9 kDa. TGF-β 1 (113 a.a.) is purified by proprietary chromatographic techniques

### ★ Source

*E.Coli*

### ★ Synonyms

TGF-beta-1, CED, DPD1, TGFB, TGF-b 1, LAP, TGFB1.

### ★ Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### ★ Solubility

It is recommended to reconstitute the lyophilized TGFβ1 in sterile 10mM HCL at a concentration of 0.1mg/ml, which can then be further diluted to other aqueous solutions.

### ★ Formulation

Lyophilized from a sterile filtered solution containing 0.1% trifluoroacetic acid (TFA) and trehalose (1:20 protein to Trehalose ratio)

### ★ Purity

Greater than 95.0% as determined by:  
(a) Analysis by SDS-PAGE

### ★ Amino acid sequence

MALDTNYCFS STEKNCCVRQ LYIDFRKDLG WKWIHEPKGY HANFCLGPCP  
YIWSLDTQYS KVLALYNQHN PGASAAPCCV PQALEPLPIV YVGRKPKVE  
QLSNMIVRSC KCS.

### ★ Biological Activity

The ED<sub>50</sub> as determined by the dose-dependent inhibition of IL-4-induced proliferation of HT-2 cells is 45.9pg/ml, corresponding to a specific activity of 2.2x10<sup>7</sup>units/mg.

### ★ References

1. Title: attenuates skeletal muscle dystrophy in mdx mice .  
Publication:Published online before print March 16, 2009, doi: 10.1096/fj.09-129833 August 2009 The FASEB Journal vol. 23 no. 8 2539-2548 .  
Link:<http://www.fasebj.org/content/23/8/2539.full>
2. Title:Characterization of Non-Specific Cytotoxic Cell Receptor Protein 1: A New Member of the Lectin-Type Subfamily of F-Box Proteins.  
Publication:Kallio H, Tolvanen M, J?nis J, Pan P-w, Laurila E, et al. (2011) Characterization of Non-Specific Cytotoxic Cell Receptor Protein 1: A New Member of the Lectin-Type Subfamily of F-Box Proteins. PLoS ONE 6(11): e27152. doi:10.1371/journal.pone.0027152  
Link:<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0027152>
3. Title: Cancer-Associated Carbonic Anhydrases IX and XII: Effect of Growth Factors on Gene Expression in Human Cancer Cell Lines.  
Publication: Journal of Cancer Molecules 5(3): 73-78, 2010.  
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