

## Recombinant Human TGFB1 protein, His-tagged

Cat. No. TGFB1-244H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Human TGFB1 fused with His tag was expressed in E. coli.

**Species** Human

**Source** E.coli

#### Description

TGF-beta 1 is a member of the transforming growth factor beta (TGF-beta) family. The transforming growth factor-beta family of polypeptides are involved in the regulation of cellular processes, including cell division, differentiation, motility, adhesion and death. TGF-beta 1 positively and negatively regulates many other growth factors. It inhibits the secretion and activity of many other cytokines including interferon- $\gamma$ , tumor necrosis factor-alpha and various interleukins. It can also decrease the expression levels of cytokine receptors. Meanwhile, TGF-beta 1 also increases the expression of certain cytokines in T cells and promotes their proliferation, particularly if the cells are immature. TGF-beta 1 also inhibits proliferation and stimulates apoptosis of B cells, and plays a role in controlling the expression of antibody, transferrin and MHC class II proteins on immature and mature B cells. As for myeloid cells, TGF-beta 1 can inhibit their proliferation and prevent their production of reactive oxygen and nitrogen intermediates. However, as with other cell types, TGF-beta 1 also has the opposite effect on cells of myeloid origin. TGF-beta 1 is a multifunctional protein that controls proliferation, differentiation and other functions in many cell types. It plays an important role in bone remodeling as it is a potent stimulator of osteoblastic bone formation, causing chemotaxis, proliferation and differentiation in committed osteoblasts. Once cells lose their sensitivity to TGF-beta1-

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

mediated growth inhibition, autocrine TGF-beta signaling can promote tumorigenesis. Elevated levels of TGF-beta1 are often observed in advanced carcinomas, and have been correlated with increased tumor invasiveness and disease progression.

<b>Form</b>	Lyophilized from sterile PBS, pH 7.4
<b>Purity</b>	> 95 % as determined by SDS-PAGE
<b>Storage</b>	Store at -70 centigrade. Avoid repeated freeze/thaw cycles.

## GENE INFORMATION

<b>Gene Name</b>	TGFB1 transforming growth factor, beta 1 [ Homo sapiens ]
<b>Official Symbol</b>	TGFB1
<b>Synonyms</b>	TGFB1; transforming growth factor, beta 1; DPD1, TGFB; transforming growth factor beta-1; Camurati Engelmann disease; CED; TGFbeta; TGF-beta-1; TGF-beta 1 protein; latency-associated peptide; LAP; DPD1; TGFB;
<b>Gene ID</b>	7040
<b>mRNA Refseq</b>	NM_000660
<b>Protein Refseq</b>	NP_000651
<b>MIM</b>	190180
<b>UniProt ID</b>	P01137
<b>Chromosome Location</b>	19q13.1

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**Pathway**

ACE Inhibitor Pathway, organism-specific biosystem; ALK1 signaling events, organism-specific biosystem; Adipogenesis, organism-specific biosystem; Amoebiasis, organism-specific biosystem; Amoebiasis, conserved biosystem; Cell cycle, organism-specific biosystem; Cell cycle, organism-specific biosystem;

**Function**

enzyme binding; eukaryotic cell surface binding; growth factor activity; protein N-terminus binding; protein binding; protein heterodimerization activity; protein homodimerization activity; type II transforming growth factor beta receptor binding; type II transforming growth factor beta receptor binding;

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