

Human TGF-beta3, liquid

Human Transforming Growth Factor-beta3 recombinant

Synonyms: Transforming Growth Factor-beta3, TGFB3, ARVD, FLJ16571, TGF-beta3.

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order#	Lot#	Expiry Date
25 µg	1939.950.025		
100 µg	1939.950.100		
1 mg	1939.950.199		

Please enquire for bulk quantities and other vial sizes.

Description

Recombinant human TGF-β3 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-β, TGF-β1, β2, β3, 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 complexes, 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. The physiological role of TGF-β3 is still unknown but its expression pattern suggests a role in the regulation of certain development processes.

- **Biological Activity** ≥ 2 x 10⁷ units/mg
- **Source** *E. coli*
- **Purity** ≥ 98 % (SDS-PAGE, HPLC)
- **Endotoxin Level** ≤ 01 ng/µg (≤ 1 EU/µg)
- **Stabilizer** None
- **Buffer** Ethanol (20 %); Acetic Acid (0.12 %)*
- **Physical State** Liquid (0.25mg/ml)

Biological Activity

The ED₅₀ of ≤ 0.05 ng/ml was determined by TGF-β3's ability to inhibit the mouse IL-4-dependent proliferation of mouse HT-2 cells. It corresponds to a specific activity of ≥ 2 x 10⁷ units/mg.

Reconstitution

We recommend a quick spin followed by reconstitution in 5-10mM Citric Acid 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 original vial is stable at 4°C for up to 6 months and below -20°C until retest date. **Please avoid repeated freeze-thaw cycles.**

Amino Acid Sequence

MALDTNYCFR NLEENCCVRP LYIDFRQDLG WKWVHEPKGY YANFCSGPCP YLRSADTTHS TVLGLYNTLN
 PEASASPCCV PQDLEPLTIL YYVGRTPKVE QLSNMVVKSC KCS

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

Biological Activity of recombinant Human TGF-beta3 (*E. coli*)

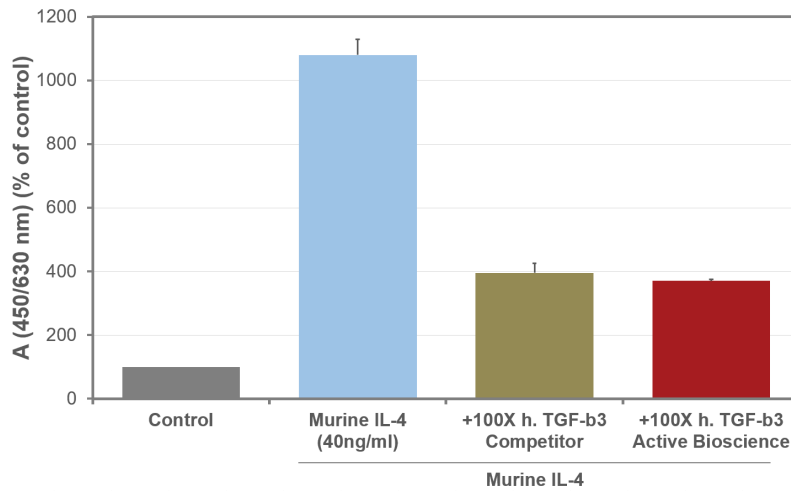


Fig. 1: Inhibition of mouse IL4-induced proliferation in HT2 cells by Human TGF-beta3. HT2 cells were stimulated with 40ng/ml mouse IL4 and inhibited with 4µg/ml Human TGF-beta3. Values are the means (±SD) of triplicate determinations and expressed as percentage of control.

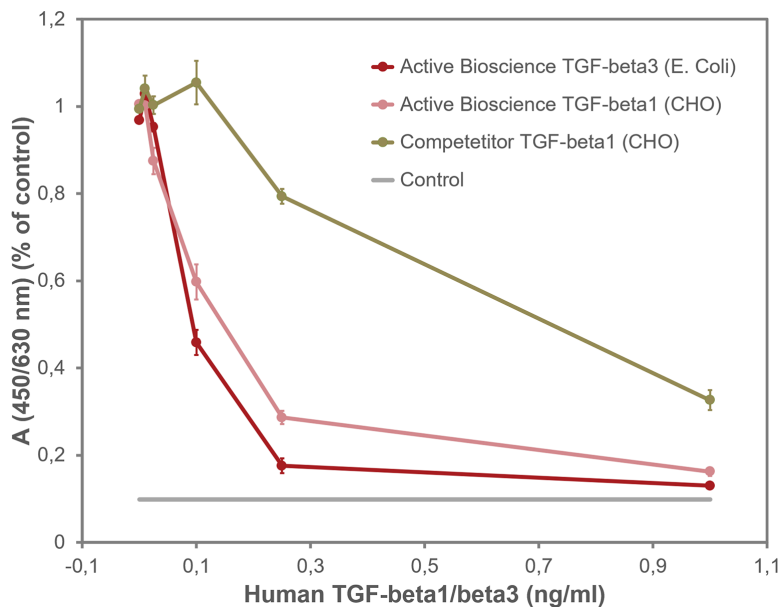


Fig. 2: Inhibition of mouse IL4-induced proliferation by Human TGF-beta1/beta3. Values are the means (±SD) of triplicate determinations and expressed as percentage of control.

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

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