

DATASHEET
Version 20180730**TGF- β 1, Human****Cat. No.:** Z03411-10**Size:** 10.0 μ g

Synonyms: TGFB; TGFB1; TGF-beta 1 protein; TGFbeta 1; TGF-beta 1; TGFbeta; TGF-beta-1; transforming growth factor beta-1; transforming growth factor, beta 1; TGF- β 1; TGF β 1

Description:

TGF- β 1 (transforming growth factor beta 1) is one of three closely related mammalian members of the large TGF- β 1 superfamily that share a characteristic cystine knot structure. TGF- β 1, -2 and -3 are highly pleiotropic cytokines that act as cellular switches to regulate processes such as immune function, proliferation and epithelial-mesenchymal transition. Each TGF- β isoform has some non-redundant function; for TGF- β 1, mice with targeted deletion show defects in hematopoiesis and endothelial differentiation and died of overwhelming inflammation. TGF- β 1 signaling begins with high-affinity binding to a type II ser/thr kinase receptor termed TGF- β RII. This receptor then phosphorylates and activates a second ser/thr kinase receptor, TGF- β RI (also called activin receptor-like kinase (ALK)-5), or alternatively, ALK-1. This complex phosphorylates and activates Smad proteins that regulate transcription.

Recombinant Human TGF- β 1 produced in CHO cells is a polypeptide chain containing 112 amino acids. A fully biologically active molecule, rhTGF- β 1 has a molecular mass of 12 kDa, analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

00001 ALDTNYCF SSTEKNCC VRQLYIDF RKDLGWKW IHEPKGYH
00041 ANFCLGPC PYIWSLDT QYSKVLAL YNQHNPGA SAAPCCVP

Source: CHO**Species:** Human

Biological Activity: ED₅₀ < 0.2ng/mL, measured in ability to inhibit the mouse IL-4-dependent proliferation of HT-2 cells.

Molecular Weight: 12 kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized from a 0.2 μ m filtered solution in 50mM NaAc, 50mM NaCl, pH 5.0.

Reconstitution: Reconstituted in ddH₂O or 50mM Citrate at 100 μ g/ml.

Purity: > 95% as analyzed by reducing SDS-PAGE.

Endotoxin Level: < 0.2 EU/ μ g, determined by LAL method.

Storage: Lyophilized recombinant TGF- β 1 remains stable for up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Human TGF- β 1 should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it's recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.