

Active Recombinant Human TGFB1 Homodimer

Cat. No. TGFB1-051H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant human transforming growth factor- β 1 is a homodimer containing 224 amino acid residues which is expressed in Dihydrofolate reductase-deficient mammalian cell line CHO/dhfr ⁻ .
Species	Human
Source	CHO
Description	This gene encodes a secreted ligand of the TGF-beta (transforming growth factor-beta) superfamily of proteins. Ligands of this family bind various TGF-beta receptors leading to recruitment and activation of SMAD family transcription factors that regulate gene expression. The encoded preproprotein is proteolytically processed to generate a latency-associated peptide (LAP) and a mature peptide, and is found in either a latent form composed of a mature peptide homodimer, a LAP homodimer, and a latent TGF-beta binding protein, or in an active form consisting solely of the mature peptide homodimer. The mature peptide may also form heterodimers with other TGFB family members. This encoded protein regulates cell proliferation, differentiation and growth, and can modulate expression and activation of other growth factors including interferon gamma and tumor necrosis factor alpha. This gene is frequently upregulated in tumor cells, and mutations in this gene result in Camurati-Engelmann disease.
Form	Sterile lyophilized powder

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Molecular Mass	25.5 kDa
Bio-activity	Activity is measured by the Mv 1 Lu (NBL-7) cell-inhibition assay, with a specific activity $\geq 2.5 \times 10^7$ RU/mg.
Endotoxin	<1 EU/ μ g determined by LAL.
Purity	$\geq 97\%$
Storage	Lyophilized samples remain stable for 36 months when stored at -20 to -70 centigrade from the date of manufacture. After reconstitution, the cytokine can be kept for one month at $2-8$ centigrade under sterile conditions, or for three months at -20 to -70 centigrade in a manual-defrost freezer, without significant loss of activity. Avoid repeated freeze-thaw cycles.
Storage Buffer	This product is supplied as a sterile lyophilized powder in a buffer of 100 mM Glycine, 150 mM NaCl, pH 4.0.
Reconstitution	Before opening the vial, centrifuge at 10,000 rpm for 30–60 seconds, or at 3,000 rpm for 5 minutes, then reconstitute with 0.2 mL of sterile water.

GENE INFORMATION

Gene Name	TGFB1 transforming growth factor, beta 1 [Homo sapiens (human)]
Official Symbol	TGFB1
Synonyms	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

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Gene ID	7040
mRNA Refseq	NM_000660
Protein Refseq	NP_000651
MIM	190180
UniProt ID	P01137

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