

# Human Mature TGF beta 1 Protein

Cat. No. TG1-HM00M



## Description

Source	Recombinant Human Mature TGF beta 1 Protein is expressed from HEK293 without tag.
	It contains Ala279-Ser390.
Accession	P01137
Molecular Weight	The protein has a predicted MW of 13.2 kDa (monomer). Due to glycosylation, the protein migrates to 14-15 kDa (monomer) under reduced (R) condition and 26-30 kDa (dimer) under Non reducing (N) condition based on Bis-Tris PAGE result.
Endotoxin	Less than 1 EU per µg by the LAL method.
Purity	> 95% as determined by Bis-Tris PAGE

## Formulation and Storage

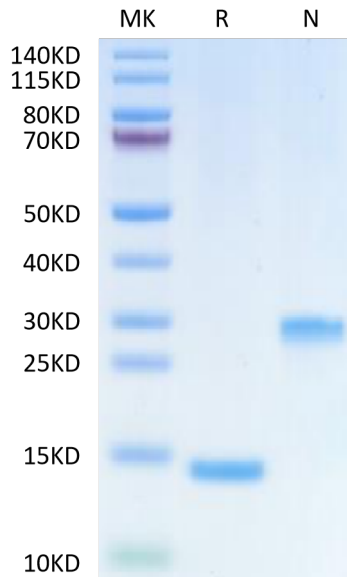
Formulation	Lyophilized from 0.22µm filtered solution in 50mM Glycine 150mM NaCl (pH 2.5). Normally 8% trehalose is added as protectant before lyophilization.
Reconstitution	Dissolve the lyophilized protein in 4mM HCL. Please refer to the Certificate of Analysis for detailed instructions.
Storage	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

TGF-beta 1 (transforming growth factor beta 1) is one of three closely related mammalian members of the large TGF-beta superfamily that share a characteristic cystine knot structure. TGF-beta 1, -2 and -3 are highly pleiotropic cytokines that are proposed to act as cellular switches that regulate processes such as immune function, proliferation and epithelial-mesenchymal transition. Transforming growth factor beta-1 is multifunctional protein that regulates the growth and differentiation of various cell types and is involved in various processes, such as normal development, immune function, microglia function and responses to neurodegeneration.

## Assay Data

### Bis-Tris PAGE



Human Mature TGF beta 1 on Bis-Tris PAGE under reduced (R) condition and Non reducing (N) condition. The purity is greater than 95%.

### Cell Based Assay

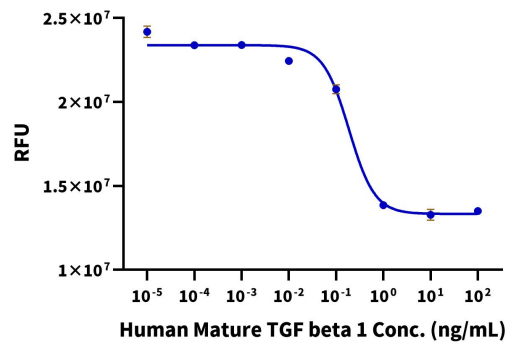
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Assay Data

Recombinant Human Mature TGF beta 1 Bioactivity

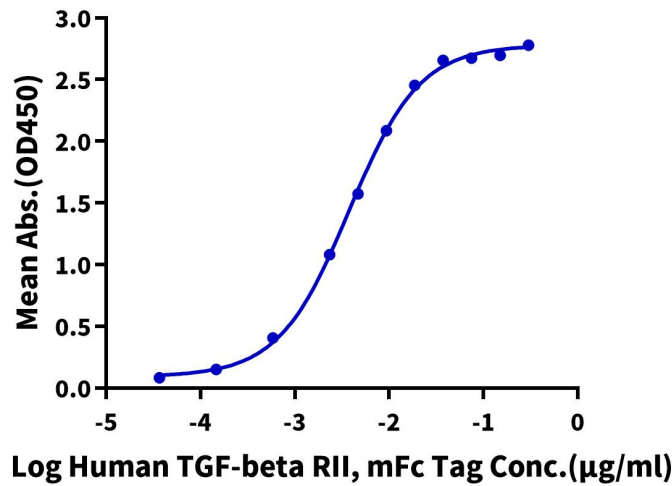


Measured by its ability to inhibit cell proliferation of Mv-1-lu mink lung epithelial cells. The ED50 for this effect is typically 0.1-0.2 ng/mL.

ELISA Data

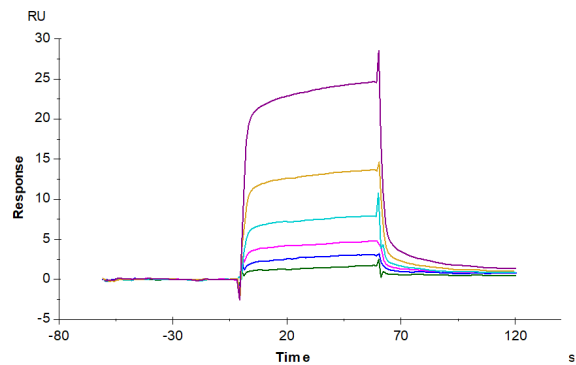
Human Mature TGF beta 1, No Tag ELISA

0.1µg Human Mature TGF beta 1, No Tag Per Well



Immobilized Human Mature TGF beta 1, No Tag at 1µg/ml (100µl/well) on the plate. Dose response curve for Human TGF-beta RII, mFc Tag with the EC50 of 3.8ng/ml determined by ELISA (QC Test).

SPR Data



Human TGFBR1, mFc Tag captured on CM5 Chip via Protein A can bind Human Mature TGF beta 1, No Tag with an affinity constant of 0.35 µM as determined in SPR assay (Biacore T200).