

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 1EU per µg by the LAL method.
Purity	> 95% as determined by Bis-Tris PAGE

Formulation and Storage

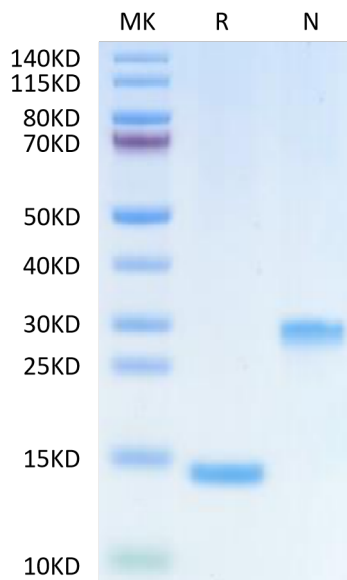
Formulation	Lyophilized from 0.22µm filtered solution in 50mM Glycine 150mM NaCl (pH 2.5). Normally 8% trehalose is added as protectant before lyophilization.
Reconstitution	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 µg/ml is recommended. Dissolve the lyophilized protein in 4mM HCl.
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



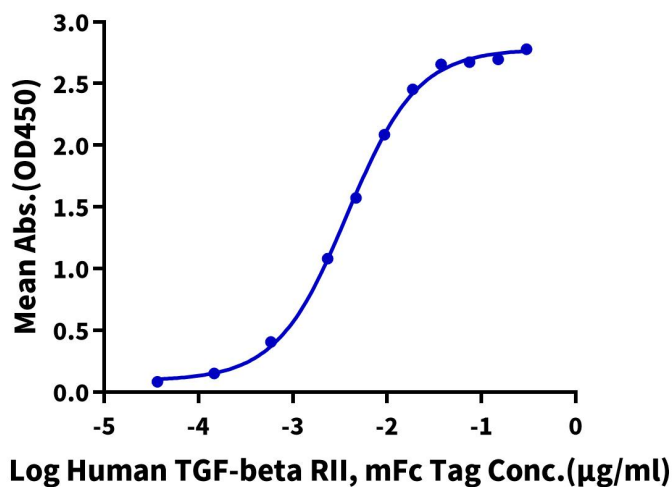
Human Mature TGF beta 1 on Bis-Tris PAGE under reduced (R) condition and Non reducing (N) condition. The purity is greater than 95%.

ELISA Data

Assay Data

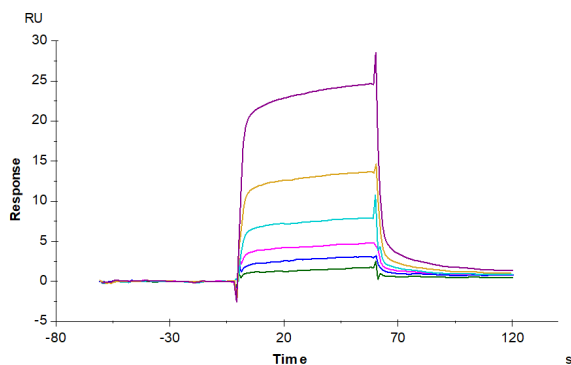
Human Mature TGF beta 1, No Tag ELISA

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).

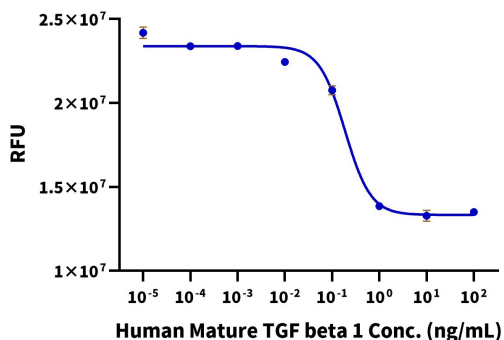
SPR Data



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).

Cell Based Assay

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.