Biotinylated Human TGF-beta RII / TGFBR2 Protein, His,Avitag™ (HPLC verified)

Catalog # TG2-H82E4

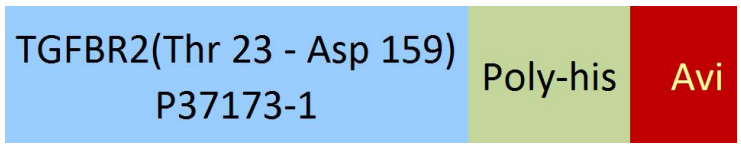
Synonym

TGFBR2,TGFR2,TbetaR-II,TGFβR2

Source

Biotinylated Human TGF-beta RII, His,Avitag(TG2-H82E4) is expressed from human 293 cells (HEK293). It contains AA Thr 23 - Asp 159 (Accession # P37173-1).
Predicted N-terminus: Thr 23

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 19.1 kDa. The protein migrates as 28-40 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-HPLC.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

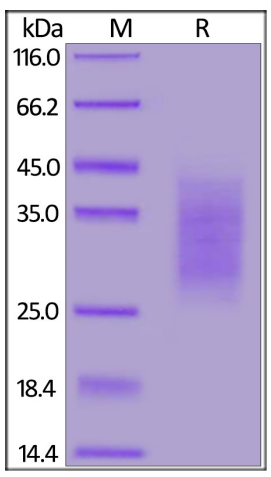
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

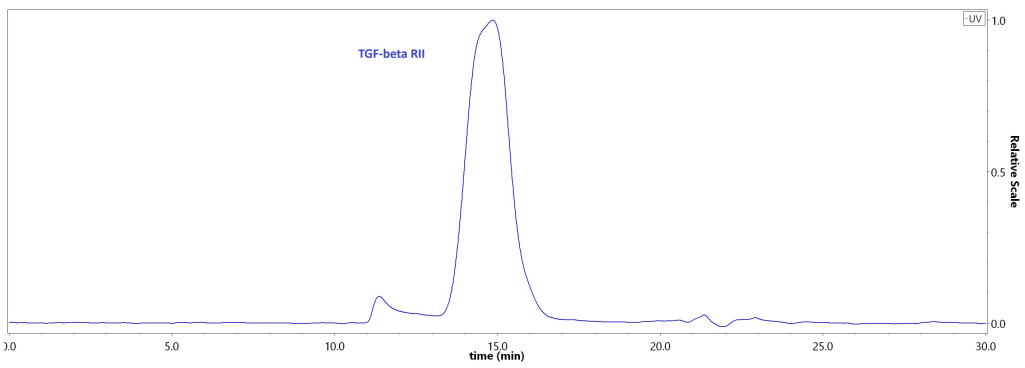
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Biotinylated Human TGF-beta RII, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

SEC-HPLC

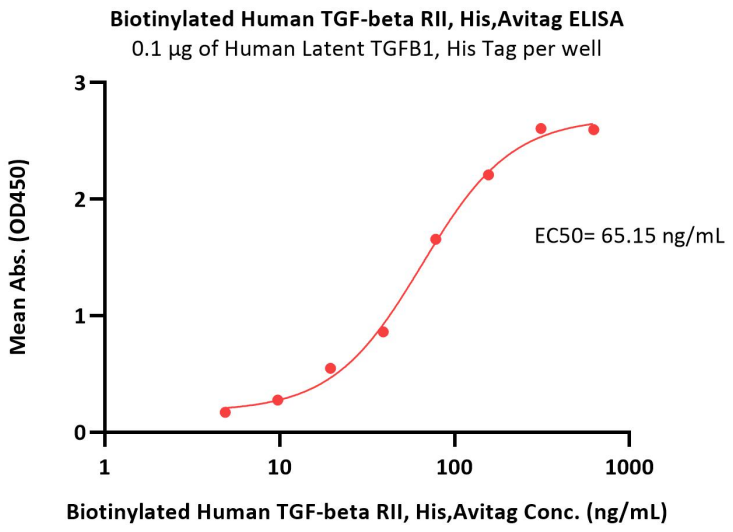


The purity of Biotinylated Human TGF-beta RII, His,Avitag (Cat. No. TG2-H82E4) was greater than 90% as determined by SEC-HPLC.

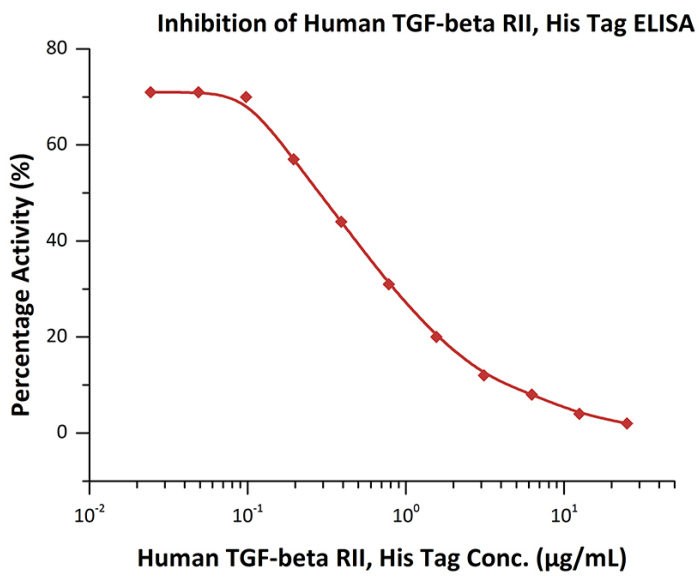
Bioactivity-ELISA

Biotinylated Human TGF-beta RII / TGFBR2 Protein, His,Avitag™ (HPLC verified)

Catalog # TG2-H82E4



Immobilized Human Latent TGFB1, His Tag (Cat. No. TG1-H524x) at 1 μg/mL (100 μL/well) can bind Biotinylated Human TGF-beta RII, His,Avitag (Cat. No. TG2-H82E4) with a linear range of 5-78 ng/mL (QC tested).



Serial dilutions of Human TGF-beta RII, His Tag (Cat. No. TG2-H52H5) were added into Human Latent TGFB1, His Tag (Cat. No. TG1-H524x) : Biotinylated Human TGF-beta RII, His,Avitag (Cat. No. TG2-H82E4) binding reactions. The half maximal inhibitory concentration (IC50) is 0.39287 μg/mL (Routinely tested).

Background

TGF-beta receptor type-2 (TGFBR2 or TGFR-2) is also known as TGF-beta type II receptor, Transforming growth factor-beta receptor type II, TbetaR-II, TGFβR2, which is a homodimer or heterohexamer, belongs to the protein kinase superfamily, TKL Ser/Thr protein kinase family and TGFB receptor subfamily. TGFR2 / TGFBR2 binds TGF-β1 / TGFB1 and TGF-β3 / TGFB3 with high affinity and TGF-β2 / TGFB2 with a much lower affinity. This type I I receptor forms a heterodimeric complex with type I receptor and is essential for signal transduction. Upon ligand binding, the TGFR2 autophosphorylates its cytoplasmic domain and subsequently phosphorylates the downstream molecules which then enter the nucleus and regulate the transcription of a subset of genes related to cell proliferation.

Clinical and Translational Updates