

## Recombinant Human TGF beta 2 protein(His Tag)

Catalog Number: PKSH034148

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

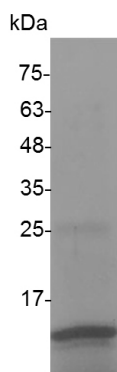
### Description

<b>Species</b>	Human
<b>Source</b>	E.coli-derived Human TGF beta 2 protein Ala 303-Ser 414, with an C-terminal His
<b>Calculated MW</b>	13.7 kDa
<b>Observed MW</b>	15 kDa
<b>Accession</b>	P61812
<b>Bio-activity</b>	Measure by its ability to inhibit IL-4-induce proliferation in HT-2 cells. The ED <sub>50</sub> for this effect is <0.2 ng/mL. The specific activity of recombinant human TGF beta 2 is > 5 x 10 <sup>6</sup> IU/mg.

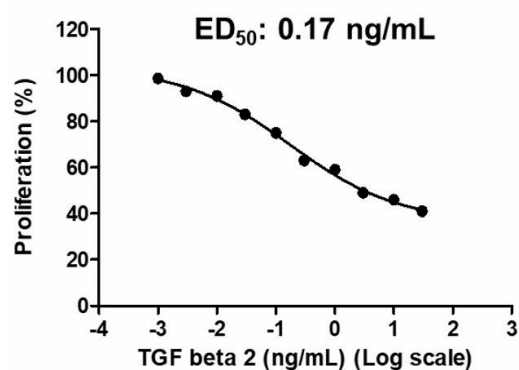
### Properties

<b>Purity</b>	> 98 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 0.01 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile 20 mM sodium citrate, 0.2 M NaCl, pH 3.5. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

### Data



> 98 % as determined by reducing SDS-PAGE.



Measure by its ability to inhibit IL-4-induce proliferation in HT-2 cells. The ED<sub>50</sub> for this effect is <0.2 ng/mL. The specific activity of recombinant human TGF beta 2 is > 5 x 10<sup>6</sup> IU/mg.

### Background

#### For Research Use Only

TGF-beta 2 (transforming growth factor beta 2) is one of three closely related mammalian members of the large TGF-beta superfamily that share a characteristic cysteine knot structure. TGF-beta 1, -2 and -3 are highly pleiotropic cytokines proposed to act as cellular switches that regulate processes such as immune function, proliferation and epithelial-mesenchymal transition. Each TGF-beta isoform has some non-redundant functions; for TGF-beta 2, mice with targeted deletion show defects in development of cardiac, lung, craniofacial, limb, eye, ear and urogenital systems. Covalent linkage of LAP to one of three latent TGF-beta binding proteins (LTBPs) creates a large latent complex that may interact with the extracellular matrix. TGF-beta is activated from latency by pathways that include actions of the protease plasmin, matrix metalloproteases, thrombospondin 1 and a subset of integrins. TGF-beta 2 signaling begins with binding to a complex of the accessory receptor betaglycan (also known as TGF-beta RIII) and a type II ser/thr kinase receptor termed TGF-beta RII. This receptor then phosphorylates and activates another ser/thr kinase receptor, TGF-beta RI (also called activin receptor-like kinase (ALK) -5), or alternatively, ALK-1. The whole complex phosphorylates and activates Smad proteins that regulate transcription. Use of other signaling pathways that are Smad-independent allows for disparate actions observed in response to TGF-beta in different contexts.

## For Research Use Only

Toll-free: 1-888-852-8623  
Web: [www.elabscience.com](http://www.elabscience.com)

Tel: 1-832-243-6086  
Email: [techsupport@elabscience.com](mailto:techsupport@elabscience.com)

Fax: 1-832-243-6017