

Recombinant Human TGF beta 2 protein(His Tag)

Catalog Number: PKSH034148

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

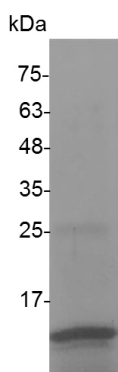
Description

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

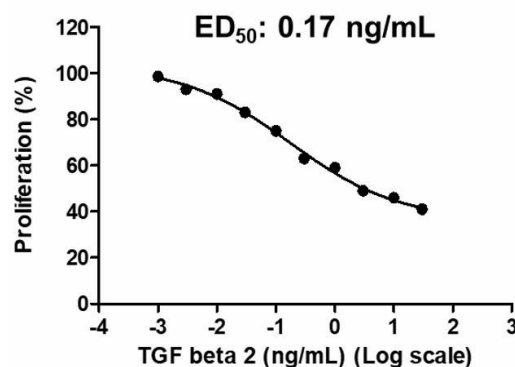
Properties

| | |
|-----------------------|---|
| Purity | > 98 % as determined by reducing SDS-PAGE. |
| Endotoxin | < 0.01 EU per µg of the protein as determined by the LAL method. |
| Storage | 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. |
| Shipping | This product is provided as lyophilized powder which is shipped with ice packs. |
| Formulation | 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. |
| Reconstitution | Please refer to the printed manual for detailed information. |

Data



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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.