

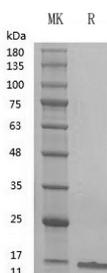
**Product Name: Recombinant Human TGF- $\beta$ 1**  
**Catalog #: PCH2537**



## Summary

|                                 |  |
|---------------------------------|--|
| <b>Name</b>                     | TGF- $\beta$ 1   |
| <b>Purity</b>                   | Greater than 98% as determined by reducing SDS-PAGE  |
| <b>Endotoxin level</b>          | $\leq 10$ EU/mg  |
| <b>Construction</b>             | Recombinant Human TGF- $\beta$ 1 is produced by our Mammalian cell expression system and the target gene encoding Ala279-Ser390 is expressed.  |
| <b>Accession #</b>              | P01137   |
| <b>Host</b>                     | Human Cells  |
| <b>Species</b>                  | Human  |
| <b>Predicted Molecular Mass</b> | 12.8 kDa   |
| <b>Formulation</b>              | Lyophilized From 0.085% TFA,30% ACN,5% mannitol,pH 2.5   |
| <b>Shipping</b>                 | The product is shipped on dry ice/polar packs.Upon receipt, store it immediately at the temperature listed below.  |
| <b>Stability&amp;Storage</b>    | Store at $\leq -70^{\circ}\text{C}$ , stable for 6 months after receipt.Store at $\leq -70^{\circ}\text{C}$ , stable for 3 months under sterile conditions after opening. Please minimize freeze-thaw cycles.  |
| <b>Reconstitution</b>           | Always centrifuge tubes before opening.Do not mix by vortex or pipetting.It is not recommended to reconstitute to a concentration less than 100 $\mu\text{g}/\text{ml}$ .Dissolve the lyophilized protein in distilled water.Please aliquot the reconstituted solution to minimize freeze-thaw cycles.Always centrifuge tubes before opening.Do not mix by vortex or pipetting.It is not recommended to reconstitute to a concentration less than 100 $\mu\text{g}/\text{ml}$ .Dissolve the lyophilized protein in distilled water.Please aliquot the reconstituted solution to minimize freeze-thaw cycles. |

## SDS-PAGE image



## Background

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**Alternative Names**

Transforming Growth Factor Beta-1; TGF-Beta-1; Latency-Associated Peptide; LAP; TGFB1; TGFB

**Background**

Transforming Growth Factor  $\beta$ -1 (TGF $\beta$ -1) is a secreted protein which belongs to the TGF- $\beta$  family. TGF $\beta$ -1 is abundantly expressed in bone, articular cartilage and chondrocytes and is increased in osteoarthritis (OA). TGF $\beta$ -1 performs many cellular functions, including the control of cell growth, cell proliferation, cell differentiation and apoptosis. The precursor is cleaved into a latency-associated peptide (LAP) and a mature TGF $\beta$ -1 peptide. Disulfide-linked homodimers of LAP and TGF-beta 1 remain non-covalently associated after secretion, forming the small latent TGF-beta 1 complex. Purified LAP is also capable of associating with active TGF-beta with high affinity, and can neutralize TGF-beta activity. 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 activation from latency is controlled both spatially and temporally, by multiple pathways that include actions of proteases such as plasmin and MMP9, and/or by thrombospondin 1 or selected integrins. Although different isoforms of TGF-beta are naturally associated with their own distinct LAPs, the TGF-beta 1 LAP is capable of complexing with, and inactivating, all other human TGF-beta isoforms and those of most other species. Mutations within the LAP are associated with Camurati-Engelmann disease, a rare sclerosing bone dysplasia characterized by inappropriate presence of active TGF-beta 1.

**Note**

For Research Use Only , Not for Diagnostic Use.