

**Product Name: Recombinant Human LAP (TGF-beta 1)**  
**Catalog #: PHH2193**

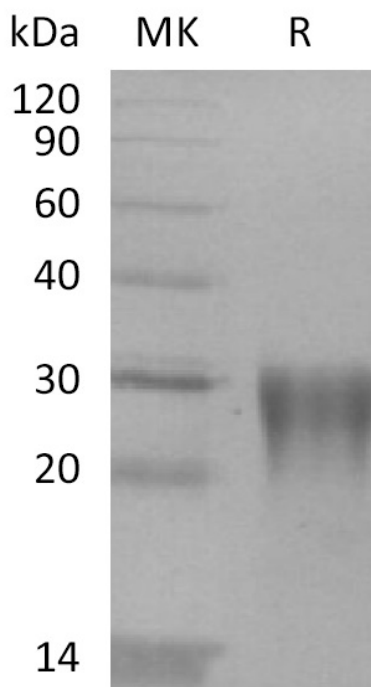


## Summary

<b>Name</b>	LAP (TGF-beta 1)
<b>Purity</b>	Greater than 95% as determined by reducing SDS-PAGE
<b>Endotoxin level</b>	<1 EU/μg as determined by LAL test.
<b>Construction</b>	Recombinant Human Transforming Growth Factor beta 1 is produced by our Mammalian expression system and the target gene encoding Leu30-Arg278(Cys33Ser) is expressed.
<b>Accession #</b>	P01137
<b>Host</b>	Human Cells
<b>Species</b>	Human
<b>Predicted Molecular Mass</b>	28.5 KDa
<b>Formulation</b>	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.
<b>Stability&amp;Storage</b>	Store at ≤-70°C, stable for 6 months after receipt. Store at ≤-70°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 100μg/ml. Dissolve the lyophilized protein in distilled water. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

## SDS-PAGE image

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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.