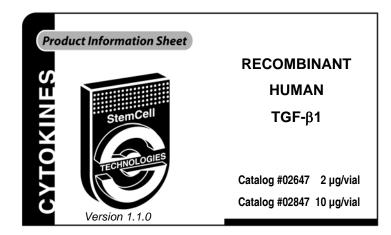
# PRODUCT DESCRIPTION:

Human Transforming Growth Factor- $\beta1$  (TGF- $\beta1$ ) is a pleiotropic cytokine produced primarily by platelets and bone, and in smaller amounts by most nucleated cell types and tumors. TGF- $\beta1$  is involved in tissue remodelling, wound repair, development and hematopoiesis. TGF- $\beta1$  is stimulatory for cells of mesenchymal origin and inhibitory for cells of epithelial or neuroectodermal origin. It is also a switch factor for IgA. Human TGF- $\beta1$  is synthesized as a dimeric inactive precursor of 390 amino acid residues, which is cleaved to an active dimer of 112 residues disulphide-linked peptides. The mature protein has a molecular mass of 25 kDa. TGF- $\beta1$  binds to three types of receptors. Type I and Type II TGF- $\beta1$  receptors encode serine/threonine kinases and mediate signal transduction events via autophosphorylation.



# SOURCE:

A DNA sequence encoding the human TGF-β1 precursor protein was expressed in CHO cells. Mature human TGF-β1 was purified from the acidified conditioned media.

### **PURITY:**

Greater than 97%, as determined by SDS-PAGE and visualized by silver stain. Endotoxin level is less than 0.1 ng per  $\mu$ g of the cytokine as determined by the LAL method.

#### **FORMULATION:**

Lyophilized from a 0.2  $\mu$ m filtered solution in 30% acetonitrile plus 0.1% TFA, containing 50  $\mu$ g of bovine serum albumin per 1  $\mu$ g of the cytokine.

### **RECONSTITUTION:**

Purified recombinant human TGF-β1 is an extremely hydrophobic protein that adheres strongly to surfaces. To ensure recovery, lyophilized samples should be reconstituted with sterile 4 mM HCl containing 1 mg/mL bovine serum albumin or human serum albumin to a final TGF-β1 concentration of no less than 1 μg/mL.

# STABILITY AND STORAGE:

Lyophilized samples are stable for greater than 6 months at -20°C to -70°C.

Upon reconstitution, this cytokine can be stored under sterile conditions at 2-4°C for 1 month or at -20°C to -70°C for 3 months without detectable loss of activity.

Avoid repeated freeze-thaw cycles.

### **ACTIVITY:**

The biological activity of recombinant human TGF-β1 was measured by its inhibition of the murine IL-4-dependent <sup>3</sup>H-thymidine incorporation by HT-2 cells. The ED<sub>50</sub> for this inhibition was typically 0.04 - 0.2 ng/mL.

See Material Safety Data Sheet for more information.

THIS REAGENT IS FOR RESEARCH ONLY.
IT IS NOT TO BE ADMINISTERED TO HUMANS.

StemCell Technologies

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In North America