

PRODUCT DESCRIPTION:

Human Transforming Growth Factor- β 1 (TGF- β 1) is a pleiotropic cytokine produced primarily by platelets and bone, and in smaller amounts by most nucleated cell types and tumors. TGF- β 1 is involved in tissue remodelling, wound repair, development and hematopoiesis. TGF- β 1 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- β 1 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- β 1 binds to three types of receptors. Type I and Type II TGF- β 1 receptors encode serine/threonine kinases and mediate signal transduction events via autophosphorylation.

SOURCE:

A DNA sequence encoding the human TGF- β 1 precursor protein was expressed in CHO cells. Mature human TGF- β 1 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 μ g of the cytokine as determined by the LAL method.

FORMULATION:

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

RECONSTITUTION:

Purified recombinant human TGF- β 1 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- β 1 concentration of no less than 1 μ g/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- β 1 was measured by its inhibition of the murine IL-4-dependent 3 H-thymidine incorporation by HT-2 cells. The ED₅₀ for this inhibition was typically 0.04 - 0.2 ng/mL.

Product Information Sheet

CYTOKINES



Version 1.1.0

**RECOMBINANT
HUMAN
TGF- β 1**

Catalog #02647 2 μ g/vial
Catalog #02847 10 μ g/vial

See Material Safety Data Sheet for more information.

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

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