Product Information

Transforming Growth Factor-β3 human recombinant, expressed in Sf21 cells

Catalog Number T5425
Storage Temperature –20 °C

Synonyms: TGF-β3

Product Description
Transforming Growth Factor-β is a multifunctional protein capable of influencing cell proliferation, differentiation, and a variety of cellular functions.1 2 In general, TGF-β stimulates growth of cells of mesenchymal origin, but inhibits growth of hepatocytes, T and B lymphocytes, and epithelial cells. TGF-β is known to interact with several agents including epidermal growth factor (EGF), fibroblast growth factor (FGF), transforming growth factor-α (TGF-α), platelet-derived growth factor (PDGF), and interleukin-2 (IL-2). TGF-β is an important mediator in the formation of extracellular matrix, generally with activities that stimulate the formation of extracellular matrix and inhibit the degradation of the extracellular matrix.3 TGF-β is a potent inhibitor of the myogenesis of skeletal and cardiac muscle cells in vitro.4

TGF-β1, TGF-β2, and TGF-β3 have differences in potencies indicating different receptor affinities for some cell types.5 TGF-β3 is expressed in relatively high levels in normal adult human heart, lung and brain.

Recombinant human TGF-β3 was produced in the insect cell line Spodoptera frugiperda 21 using a recombinant baculovirus containing the human cDNA. TGF-β3 is a member of the TGF-β family of growth factors.

The biological activity of TGF-β3 was tested in culture by measuring its ability to inhibit 3H-thymidine incorporation in the IL-4 dependent mouse T-helper cell line HT-2.6 The EC50 is defined as the effective concentration of growth factor that elicits 50% inhibition of cell growth in a cell based bioassay.

Supplied lyophilized from 0.2 µm-filtered solution in 35% acetonitrile and 0.1% trifluoroacetic acid containing 50µg BSA per 1 µg of cytokine.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
Purified recombinant human TGF-β3 is a hydrophobic protein that adheres to surfaces. Reconstitute the contents of the vial using 0.2 µm-filtered 4 mM HCl solution, containing 1 mg/ml of BSA to produce a TGF-β3 stock solution of 1 µg/ml. Completely rinse the walls of the vial.

Storage/Stability
Store at –20 °C. Upon reconstitution, this cytokine may be stored at 2-8 °C for up to one month. For long term storage, aliquot and freeze at –20 °C to –70 °C. Avoid repeated freeze-thaw cycles. Do not store in a frost-free freezer.

References