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Product Information

Transforming Growth Factor-β1
from porcine platelets
suitable for cell culture

Catalog Number **T 5050**
Storage Temperature: –20 °C.

Synonym: TGF-β1

Product Description

Transforming Growth Factor-β1 is a multifunctional protein capable of influencing cell proliferation, differentiation, and a variety of cellular functions.[1,2] In general, TGF-β stimulates the 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 EGF, FGF, TGF-α, PDGF, and IL-2. TGF-β is an important mediator of the formation of the extracellular matrix, generally with activities that stimulate the formation of the extracellular matrix and inhibit the degradation of the extracellular matrix.[3] TGF-β is a potent inhibitor of the myogenesis of both skeletal and cardiac muscle cells *in vitro*.[4] Porcine TGF-β1 is identical in amino acid composition to human TGF-β1.

Reagent

Lyophilized from a 0.2 µm filtered solution in 35% acetonitrile and 0.1% trifluoroacetic acid containing 0.05 mg bovine serum albumin per µg 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

Reconstitute the contents of the vial using 0.2 µm-filtered 4 mM HCl, containing 1 mg/ml of high purity BSA to produce a TGF-β1 stock solution of 1 µg/ml. Completely rinse the walls of the vial.

Storage/Stability

Store at –20 °C. For extended storage, freeze in working aliquots at –70 °C or –20 °C. Repeated freezing and thawing is not recommended.

Product Profile

The biological activity of porcine TGF-β1 was tested in culture by measuring its ability to inhibit ^{3}H-thymidine incorporation in the IL-4 dependent mouse T-helper cell line HT-2.[5] The EC_{50} is defined as the effective concentration of growth factor that elicits 50% inhibition of cell growth in a cell based bioassay.

References

1. Sporn, M. B., et al., *Science*, **233**, 532 (1986).
2. Roberts, A., et al., *Adv. Cancer Res.*, **51**, 107 (1987).
3. Sporn, M., et al., *J. Cell Biol.*, **105**, 1039 (1987).
4. Sporn, M., and Roberts, A.,*Growth Factors*, **8**, 1 (1993).
5. Tsang, M. ,et al., *Lymphokine Res.*, **9**, 607 (1990).

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