

Datasheet

ActiveMax® Recombinant Human TGF-Beta 1 / TGFB1

Catalog # AMS.TG1-H4212

For Research and Further Cell Culture Manufacturing Use

Description

Source ActiveMax® Recombinant Human TGF-Beta 1 / TGFB1 (ActiveMax® Human TGF-Beta 1) Ala 279 - Ser 390 (Accession # NP_000651.3) was produced in human 293 cells (HEK293)

Predicted N-terminus Ala 279

Molecular Characterization

Endotoxin Less than 1.0 EU per µg of the ActiveMax® Human TGF-Beta 1 by the LAL method.

Purity >95% as determined by SDS-PAGE of reduced (+) and non-reduced (-) rhTGFB1.

Bioactivity The bio-activity was determined by its ability to inhibit IL-4 induced HT-2 cell proliferation. The ED50<0.05 ng/mL, corresponding to a specific activity of >2X107 Unit/mg

Formulation and Storage

Formulation Lyophilized from 0.22 µm filtered solution in TFA and acetonitrile. Normally Mannitol or Trehalose are added as protectants before lyophilization.

Contact us for customized product form or formulation.

Reconstitution See Certificate of Analysis for reconstitution instructions and specific concentrations.

Storage Lyophilized Protein should be stored at -20°C or lower for long term storage. Upon reconstitution, working aliquots should be stored at -20°C or -70°C.

Avoid repeated freeze-thaw cycles.

No activity loss was observed after storage at:

- 4-8°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

Background

Background Transforming growth factor beta 1 (TGFB1) is also known as TGF-β1, CED, DPD1, TGFB. is a polypeptide member of the transforming growth factor beta superfamily of cytokines. It is a secreted protein that performs many cellular functions, including the control of cell growth, cell proliferation, cell differentiation and apoptosis. The TGFB1 protein helps control the growth and division (proliferation) of cells, the process by which cells mature to carry out specific functions (differentiation), cell movement (motility), and the self-destruction of cells (apoptosis). The TGFB1 protein is found throughout the body and plays a role in development before birth, the formation of blood vessels, the regulation of muscle tissue and body fat development, wound healing, and immune system function. TGFB1 is particularly abundant in tissues that make up the skeleton, where it helps regulate bone growth, and in the intricate lattice that forms in the spaces between cells (the extracellular matrix). Within cells, this protein is turned off (inactive) until it receives a chemical signal to become active. TGFB1 plays an important role in controlling the immune system, and shows different activities on different types of cell, or cells at different developmental stages. Most immune cells (or leukocytes) secrete TGFB1. TGFB1 has been shown to interact with TGF beta receptor 1, LTBP1, YWHAE, EIF3I and Decorin.

- References**
- (1) Ghadami M, et al., 2000, Am. J. Hum. Genet. 66 (1): 143–7.
 - (2) Assoian R, et al., 1983, J Biol Chem , 258 (11): 7155–60.
 - (3) Derynck R, et al., 1985, Nature 316 (6030): 701–5.
 - (4) Letterio J, Roberts A, 1998, Annu Rev Immunol 16: 137–61.

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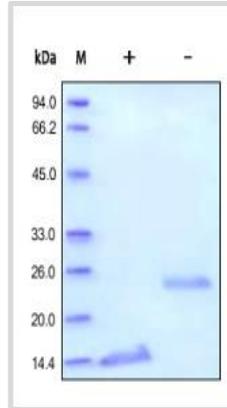
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Assay Data

SDS-PAGE Data

The purity of ActiveMax® Human TGF-Beta 1 was determined by DTT-reduced (+) and non-reduced (-) SDS-PAGE and staining overnight with Coomassie Blue.



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