

Swine TGF beta 1 Recombinant Protein (N-His) (active)

SKU Code: RPES6857

Protein Information

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Background

TGF-beta 1 is a member of the transforming growth factor beta (TGF-beta) family. The transforming growth factor-beta family of polypeptides are involved in the regulation of cellular processes, including cell division, differentiation, motility, adhesion and death. TGF-beta 1 positively and negatively regulates many other growth factors. It inhibits the secretion and activity of many other cytokines including interferon- γ , tumor necrosis factor-alpha and various interleukins. It can also decrease the expression levels of cytokine receptors. Meanwhile, TGF-beta 1 also increases the expression of certain cytokines in T cells and promotes their proliferation, particularly if the cells are immature. TGF-beta 1 also inhibits proliferation and stimulates apoptosis of B cells, and plays a role in controlling the expression of antibody, transferrin and MHC class II proteins on immature and mature B cells. TGF-beta 1 is a multifunctional protein that controls proliferation, differentiation and other functions in many cell types. It plays an important role in bone remodeling as it is a potent stimulator of osteoblastic bone formation, causing chemotaxis, proliferation and differentiation in committed osteoblasts. Once cells lose their sensitivity to TGF-beta1-mediated growth inhibition, autocrine TGF-beta signaling can promote tumorigenesis. Elevated levels of TGF-beta1 are often observed in advanced carcinomas, and have been correlated with increased tumor invasiveness and disease progression.

Size:

5 μ g

Storage Conditions:

Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Expression Host:

Escherichia coli

Bio-Activity:

Measure by its ability to inhibit IL-4-induce proliferation in HT-2 cells. The ED₅₀ for this effect is <0.1 ng/mL.

Species:

Porcine

Synonyms:

Cartilage-inducing factor, Differentiation inhibiting factor

Swiss Prot:
P07200

Form:
Lyophilized powder

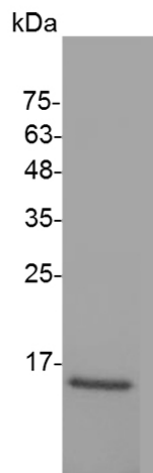
Tags:
C-His

Purity:
> 98 % as determined by reducing SDS-PAGE

Sequence:
Ala 279-Ser 390

Endotoxin:
< 0.1 EU per µg of the protein as determined by the LAL method.

Validation Data



Calculated Molecular Weight:
13.7 kDa

Observed Molecular Weight:
11-17 kDa