Recombinant Swine TGF beta 1 protein(His Tag)

Catalog Number: PKSS000014



Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description

Synonyms Differentiation inhibiting factor; Cartilage-inducing factor

Species Porcine
Expression Host E.coli

Sequence Ala 279-Ser 390

AccessionP07200Calculated Molecular Weight13.7 kDaObserved molecular weight11-17 kDaTagC-His

Bioactivity Measure by its ability to inhibit IL-4-induce proliferation in HT-2 cells. The ED₅₀

for this effect is < 0.1 ng/mL.

Properties

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

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

Storage 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.

Shipping This product is provided as lyophilized powder which is shipped with ice packs.

Formulation Lyophilized from sterile 20 mM sodium citrate, 0.2 M NaCl, pH 4.5.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as

protectants before lyophilization.

Please refer to the specific buffer information in the printed manual.

Reconstitution Please refer to the printed manual for detailed information.

Data



> 98 % as determined by reducing SDS-PAGE.

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

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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.

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