Human TGFB1 (LAP) / TGF-beta 1 Protein (His Tag)
Catalog Number: 10804-H08H1

General Information

Gene Name Synonym:
CED; DPD1; LAP; TGF-beta 1; TGFB; TGFbeta

Protein Construction:
A DNA sequence encoding the Latency-associated peptide (LAP) of human TGFB1 (Met1-Arg278) was expressed with a polyhistidine tag at the C-terminus.

Source: Human
Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE.
Endotoxin:< 1.0 EU per μg protein as determined by the LAL method.

Stability:
Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Leu 30

Molecular Mass:
The recombinant Latency-associated peptide (LAP) of human TGFB1 consists of 260 amino acids and predicts a molecular mass of 29.9 kDa.

Formulation:
Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:
Store it under sterile conditions at -20 °C to -80 °C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.
Avoid repeated freeze-thaw cycles.

Reconstitution:
Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:

Protein Description

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. As for myeloid cells, TGF-beta 1 can inhibit their proliferation and prevent their production of reactive oxygen and nitrogen intermediates. However, as with other cell types, TGF-beta 1 also has the opposite effect on cells of myeloid origin. 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.

References