**Cynomolgus TGF-beta 1 / TGFB1 Protein (His Tag)**

Catalog Number: 90294-C08H

### General Information

**Gene Name Synonym:**
TGFB1

**Protein Construction:**
A DNA sequence encoding the cynomolgus TGFB1 (Met1-Ser390) was expressed with a polyhistidine tag at the C-terminus.

**Source:** Cynomolgus

**Expression Host:** HEK293 Cells

### QC Testing

**Purity:** > 95 % as determined by SDS-PAGE.

**Bio Activity:**
1. Measured by its binding ability in a functional ELISA. 2. Immobilized Cynomolgus TGFB1-His at 10 μg/mL (100 μL/well) can bind Cynomolgus TGFBR2-Fc (Cat:90063-C02H). The EC50 of Cynomolgus TGFBR2-Fc (Cat:90063-C02H) is 28-56 ng/mL.

**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 cynomolgus TGFB1 consists 372 amino acids and predicts a molecular mass of 42.7 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:

**SDS-PAGE:**

![SDS-PAGE Image]

**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