


## Mouse TGF- $\beta$ 1 protein, His tag (Animal-Free)

Cat #: PRP1017

Size: 10  $\mu$ g/50  $\mu$ g/100  $\mu$ g/1 mg

### Product Information

	<b>Product Name:</b> Mouse TGF- $\beta$ 1 protein, His tag (Animal-Free)		
<b>REF</b>	<b>Catalog Number:</b> PRP1017	<b>LOT</b>	<b>Lot Number:</b>
	<b>Purity:</b> >95% as determined by SDS-PAGE		
	<b>Storage:</b> Store at -20°C		<b>Preparation method:</b> HEK 293 cells
	<b>Shipping:</b> The product is shipped at ambient temperature		

**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- $\gamma$ , 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- $\beta$ 1-mediated growth inhibition, autocrine TGF- $\beta$  signaling can promote tumorigenesis. Elevated levels of TGF- $\beta$ 1 are often observed in advanced carcinomas, and have been correlated with increased tumor invasiveness and disease progression.

**Sequence:** Amino acid sequence derived from mouse TGF- $\beta$ 1 (P04202) (Met1-Ser390) was expressed with a 6 His tag at the C-terminus.

**Protein length:** The recombinant human consists of 91 amino acids and predicts a molecular mass of 42.7 kDa. It migrates as an approximately 54, 41 and 15 kDa band in SDS-PAGE under reducing conditions.

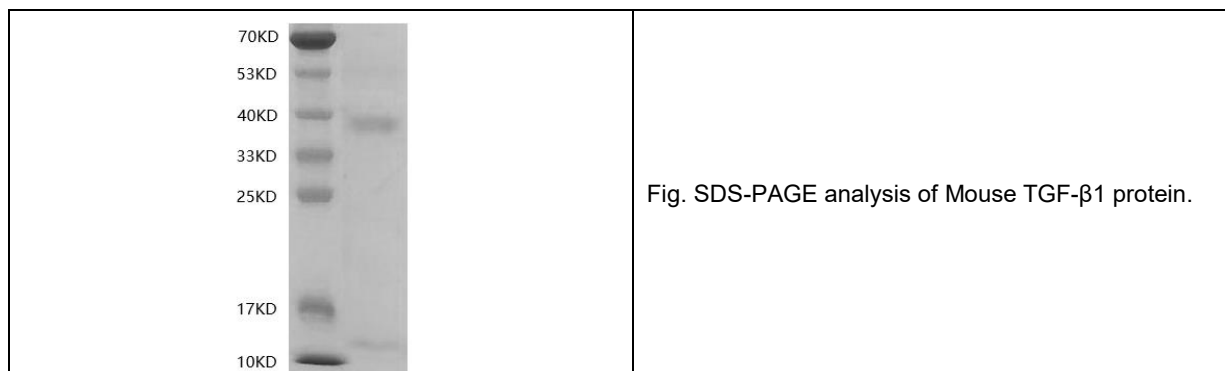
**Biological Activity:** Testing in progress.

**Endotoxin:** < 1.0 EU per µg of the protein as determined by the LAL method.

**Formulation:** Lyophilized from sterile PBS, pH 7.4.

**Storage Instructions:** Lyophilized Mouse TGF-β1 protein product should be stored desiccated below -18°C. Upon reconstitution, the protein should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Usage notes:** Always centrifuge tubes before opening. It is recommended to reconstitute the lyophilized Mouse TGF-β1 protein in sterile ddH<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.



**Note:** The product listed herein is for research use only and is not intended for use in human or clinical diagnosis. Suggested applications of our products are not recommendations to use our products in violation of any patent or as a license. We cannot be responsible for patent infringements or other violations that may occur with the use of this product.