

TGF beta 1/TGFB1 Protein, Mouse (HEK293)

Cat. No.:	HY-P7117
Synonyms:	rMuTGF-beta 1/TGFB1; Transforming growth factor beta-1; TGF-β1; LAP
Species:	Mouse
Source:	HEK 293
Accession:	P04202 (A279-S390)
Gene ID:	21803
Molecular Weight:	Approximately 12.8 kDa

PROPERTIES

AA Sequence	<p>A L D T N Y C F S S T E K N C C V R Q L Y I D F R K D L G W K W I H E P K G Y H</p> <p>A N F C L G P C P Y I W S L D T Q Y S K V L A L Y N Q H N P G A S A S P C C V P</p> <p>Q A L E P L P I V Y Y V G R K P K V E Q L S N M I V R S C K C S</p>
Biological Activity	Measured by its ability to inhibit IL-4-dependent proliferation of TF-1 human erythroleukemic cells and the ED ₅₀ is 5-25 pg/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against 4 mM HCl.
Endotoxin Level	<0.1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>TGFβ1 regulates cell proliferation, growth, differentiation and cells movement. TGFβ1 also has immunomodulatory and profibrogenic effects. Lack of TGFβ1-dependent growth control may result in oncogenesis: papillary, follicular and anaplastic thyroid cancers, prostate, breast and uterine cervical cancer, oesophagus, gastric, colorectal and liver cancers, NSCLC, and malignant melanoma. Excessive TGFβ1 activity is an integral part of the fibrotic processes occurring in the response to injury^[1]. TGFβ1 can induce renal fibrosis via activation of both canonical (Smad-based) and non-canonical (non-Smad-based) signalling pathways, which result in activation of myofibroblasts, excessive production of extracellular matrix (ECM) and inhibition of ECM degradation^[2]. TGF-β1 induces anti-inflammatory regulatory T cells (Treg), and</p>
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inflammatory T helper 17 (Th17) cells in combination with interleukin-6^[3].

REFERENCES

- [1]. Kajdaniuk D, et al. Transforming growth factor β 1 (TGF β 1) in physiology and pathology. *Endokrynol Pol.* 2013;64(5):384-96.
- [2]. Meng XM, et al. TGF- β : the master regulator of fibrosis. *Nat Rev Nephrol.* 2016 Jun;12(6):325-38.
- [3]. Komai T, et al. The effects of TGF- β s on immune responses. *Nihon Rinsho Meneki Gakkai Kaishi.* 2016;39(1):51-8.
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA