

TGF beta 1/TGFB1 Protein, Human (361a.a, HEK293, His)

Cat. No.:	HY-P73426
Synonyms:	Transforming growth factor beta-1 proprotein; LAP; TGF-beta-1; TGFB1
Species:	Human
Source:	HEK293
Accession:	P01137 (L30-S390)
Gene ID:	7040
Molecular Weight:	Approximately 16&38&55 kDa, corresponding to mature TGFβ1, LAP protein and inactive latent TGFβ1 respectively.

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<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 for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). 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>Transforming growth factor (TGF) beta 1 is a polypeptide member of the transforming growth factor beta superfamily of cytokines. TGF beta 1 is a secreted protein that performs many cellular functions, including the control of cell growth, cell proliferation, cell differentiation, apoptosis, and can regulate the expression and activation of other growth factors, including interferon gamma and tumor necrosis factor alpha. In humans, TGF-β1 is encoded by the TGFB1 gene. TGF beta 1 activates CREB3L1 by regulating intramembranous proteolysis, stimulating sustained collagen production. TGF beta 1 mediates SMAD2/3 activation by inducing SMAD2/3 phosphorylation and subsequent translocation to the nucleus and regulates dental papilla cells by promoting IPO7-mediated translocation of phosphorylated SMAD2 to the nucleus and subsequent transcription of target genes. TGF beta 1 induces epithelial-to-mesenchymal transition (EMT) and cell migration in various cell types. TGF beta 1 plays an important role in controlling the immune system, and shows different activities on different types of cell, or cells at different developmental stages^{[1][2][3][4][5][6]}.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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