

Product Data Sheet

Latent TGF beta 1/TGFB1 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P78360
Synonyms:	CEDLAP; DPD1; TGF beta1; TGFB; TGFB1; TGFbeta; TGF-beta-1; TGF β1; TGFβ; TGF-β-1
Species:	Mouse
Source:	HEK293
Accession:	P04202 (L30-S390)
Gene ID:	21803
Molecular Weight:	Approximately 11 & 40 & 51 kDa due to the glycosylation

PROPERTIES

AA Sequence	LSTCKTIDMELVKRKRIEAIRGQILSKLRLASPPSQGEVPPGPLPEAVLALYNSTRDRVAGESADPEPEPEADYYAKEVTRVLMVDRNNAIYEKTKDISHSIYMFFNTSDIREAVPEPPLLSRAELRLQRLKSSVEQHVELYQKYSNNSWRYLGNRLLTPTDTPEWLSFDVTGVVRQWLNQGDGIQGFRFSAHCSCDSKDNKLHVEINGISPKRRGDLGTIHDMNRPFLLLMATPLERAQHLHSSRHRRALDTNYCFSSTEKNCCVRQLYIDFRKDLGWKWIHEPKGYHANFCLGPCPYIWSLDTQYSKVLALYNQHNPGASASPCCVPQALEPLPIVYYVGRKPKVEQLSNMIVRSCKC
Biological Activity	 Immobilized Mouse Latent TGF beta 1, His Tag at 5 μg/mL (100 μL/well) on the plate. Dose response curve for Biotinylated Human ITGAV&ITGB6, hFc Tag with the EC₅₀ of 0.39-0.43 μg/mL determined by ELISA. Measured by its ability to inhibit the IL-4-dependent proliferation of HT-2 mouse T cells. The ED₅₀ for this effect is ≤0.2066 ng/mL, corresponding to a specific activity is ≥4.84×10⁶ units/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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

Transforming growth factor beta-1 proprotein is the precursor of the Latency-associated peptide (LAP) and Transforming growth factor beta-1 (TGF-beta-1) chains, which constitute the regulatory and active subunit of TGF-beta-1, respectively. The pro-protein is enzymatically cleaved to generate an amino-terminal Latency Associated Peptide (LAP), but this product remains non-covalently associated with TGFβ-1 keeping it in a biologically inactive state.

REFERENCES

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[2]. M Selvakumaran, et al. The novel primary response gene MyD118 and the proto-oncogenes myb, myc, and bcl-2 modulate transforming growth factor beta 1-induced apoptosis of myeloid leukemia cells. Mol Cell Biol. 1994 Apr;14(4):2352-60.

[3]. Chambaz E.M., et al. Transforming Growth Factor-Bs: A Multifunctional Cytokine Family. Implication in the Regulation of Adrenocortical Cell Endocrine Functions. 1991.

[4]. Dulce Maroni, et al. TGFB1 disrupts the angiogenic potential of microvascular endothelial cells of the corpus luteum. Cell Sci. 2011 Jul 15;124(Pt 14):2501-10.

[5]. Justin Rustenhoven, et al. TGF-beta1 regulates human brain pericyte inflammatory processes involved in neurovasculature function. Justin Rustenhoven. 2016 Feb 11;13:37.

[6]. Kai Zhang, et al. Essential role of microglial transforming growth factor-β1 in antidepressant actions of (R)-ketamine and the novel antidepressant TGF-β1. Transl Psychiatry. 2020 Jan 27;10(1):32.

Caution: Product has not been fully validated for medical applications. For research use only.

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