

Latent TGF beta 1/TGFB1 Protein, Rat (HEK293, C-His)

Cat. No.:	HY-P73615A
Synonyms:	Transforming growth factor beta-1 proprotein; LAP; TGF-beta-1; TGFB1
Species:	Rat
Source:	HEK293
Accession:	P17246 (L30-S390)
Gene ID:	59086
Molecular Weight:	Approximately 55&40&16 kDa

PROPERTIES

AA Sequence	<pre> LSTCKTIDME LVKRRKRIEAI RGQILSKLRL ASPPSQGEVP PGPLPEAVLA LYNSTRDRVA GESADPEPEP EADYYAKEVT RVLMDVRNNA IYDKTKDITH SIYMFNTSD IREAVPEPPL LSRAELRLQR FKSTVEQHVE LYQKYSNNSW RYLGNRLLTP TDTPEWLSFD VTGVVRQWLN QGDGIQGF RF SAHCSCDSKD NVLHVEINGI SPKRRGDLGT IHDMNRPFL LMATPLERAQ HLHSSRHRR LDTNYCFSST EKNCCVRQLY IDFRKDLGWK WIHEPKGYHA NFCLGPCPYI WSLDTQYSKV LALYNQHNP ASASPCCVPQ ALEPLPIVYY VGRKPKVEQL SNMIVRSCKC S </pre>
Biological Activity	Measured by its ability to inhibit proliferation of HT-2 mouse T cells. The ED ₅₀ for this effect is 0.003232-0.1047 ng/ml, corresponding to a specific activity is 9.551×10 ⁶ -3.094×10 ⁸ units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
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. 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

TGF-β1 is known to be secreted in the inactive, latent form. And latent TGF beta 1 (latent TGFB1) is comprised of three distinct components: mature TGFB1 which is a disulphide-bonded dimer, the N-terminal remnant of the TGFB1 precursor and a novel type of protein denoted the latent TGFB1-binding protein (LTBP)^[2].

Although latent TGF beta 1 is converted into its biologically active form by various mechanisms, but all mechanisms involve dissociation of TGFB1 from LAP-β1 in the soluble SLC (small latent complex) and/or the ECM bound LLC (large latent complex). In addition, Proteolytic cleavage is the most prominent cellular mechanism of latent TGFB1 activation. Latent TGF beta 1 associates with the extracellular matrix (ECM) via LTBP. LTBPs are components of the ECM, so that the proteolytic cleavage of LTBP can lead to the release of latent TGF-beta 1 from the matrix. Besides, the proteolytic cleavage of LLC and liberation of active TGFB1 is performed by BMP-1, by a variety of matrix metalloproteinases (MMPs)^[1] [3].

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

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