

Product datasheet for **TP726638**

TGF beta 1 (TGFB1) Human Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant Human LAP (TGF-beta 1)
Species:	Human
Expression cDNA Clone or AA Sequence:	Leu30-Arg278(Cys33Ser)
Buffer:	Lyophilized from a 0.2 um filtered solution of PBS, pH7.4.
Note:	Recombinant Human Transforming Growth Factor beta 1 is produced by our Mammalian expression system and the target gene encoding Leu30-Arg278(Cys33Ser) is expressed.
Stability:	12 months from date of despatch
Locus ID:	7040
UniProt ID:	P01137
Summary:	<p>Transforming Growth Factor β-1 (TGFβ-1) is a secreted protein which belongs to the TGF-β family. TGFβ-1 is abundantly expressed in bone, articular cartilage and chondrocytes and is increased in osteoarthritis (OA). TGFβ-1 performs many cellular functions, including the control of cell growth, cell proliferation, cell differentiation and apoptosis. The precursor is cleaved into a latency-associated peptide (LAP) and a mature TGFβ-1 peptide. Disulfide-linked homodimers of LAP and TGF-beta 1 remain non-covalently associated after secretion, forming the small latent TGF-beta 1 complex. Purified LAP is also capable of associating with active TGF-beta with high affinity, and can neutralize TGF-beta activity. Covalent linkage of LAP to one of three latent TGF-beta binding proteins (LTBPs) creates a large latent complex that may interact with the extracellular matrix. TGF-beta activation from latency is controlled both spatially and temporally, by multiple pathways that include actions of proteases such as plasmin and MMP9, and/or by thrombospondin 1 or selected integrins. Although different isoforms of TGF-beta are naturally associated with their own distinct LAPs, the TGF-beta 1 LAP is capable of complexing with, and inactivating, all other human TGF-beta isoforms and those of most other species. Mutations within the LAP are associated with Camurati-Engelmann disease, a rare sclerosing bone dysplasia characterized by inappropriate presence of active TGF-beta 1.</p>



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