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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.
Storage:	Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Stability:	12 months from date of despatch
Locus ID:	7040
UniProt ID:	P01137
Synonyms:	Transforming Growth Factor Beta-1; TGF-Beta-1; Latency-Associated Peptide; LAP; TGFB1; TGFB

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Summary: Transforming Growth Factor Î²-1 (TGFÎ²-1) is a secreted protein which belongs to the TGF-Î² family. TGFÎ²-1 is abundantly expressed in bone, articular cartilage and chondrocytes and is increased in osteoarthritis (OA). TGFÎ²-1 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 TGFÎ²-1 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.

Protein Families: Druggable Genome, ES Cell Differentiation/IPS, Secreted Protein, Transcription Factors

Protein Pathways: Cell cycle, Chronic myeloid leukemia, Colorectal cancer, Cytokine-cytokine receptor interaction, Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM), MAPK signaling pathway, Pancreatic cancer, Pathways in cancer, Renal cell carcinoma, TGF-beta signaling pathway