

Recombinant Human Transforming Growth Factor Beta-1/TGFB1

Catalog Number: PKSH033947

Note: Centrifuge before opening to ensure complete recovery of vial contents.

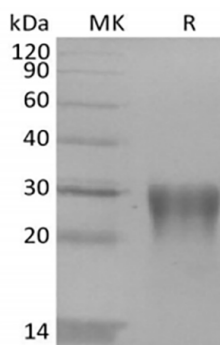
Description

| | |
|--------------|---|
| Species | Human |
| Source | HEK293 Cells-derived Human TGFB1 protein Leu30-Arg278(Cys33Ser) |
| Mol_Mass | 28.5 kDa |
| Accession | P01137 |
| Bio-activity | Not validated for activity |

Properties

| | |
|----------------|--|
| Purity | > 95 % as determined by reducing SDS-PAGE. |
| Endotoxin | < 1.0 EU per µg of the protein as determined by the LAL method. |
| Storage | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| Shipping | This product is provided as lyophilized powder which is shipped with ice packs. |
| 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. Please refer to the specific buffer information in the printed manual. |
| Reconstitution | Please refer to the printed manual for detailed information. |

Data



> 95 % as determined by reducing SDS-PAGE.

Background

For Research Use Only

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