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Human TGF beta 1 Protein (Animal-Free)

Cat #: PRP1048 Size: 5 μg/20 μg/100 μg/1 mg

Product Information

	Product Name: Human TGF beta 1 Protein (Animal-Free)		
REF	**Catalog Number:** PRP1048	LOT	**Lot Number:** Refer to product label
	Purity: > 98 % as determined by SDS-PAGE		
	Storage: Store at -20°C		**Preparation method:** *E.coli*
	Shipping: The product is shipped at ambient temperature.		

Background: TGF-β is a complex of two proteins, the inactive binding protein (LAP) and TGF-β, derived from the cleavage activation of a common 75 kDa precursor protein. LAP proteins regulate TGF-β activity spatially and temporally by isolating TGF-β along with latent TGF-β-binding protein (LTBP) in the extracellular matrix. Many stimuli, such as proteases, platelet-reactive protein-1, reactive oxygen species, and certain integrins, activate TGF-β release. Activated TGF-β binds to TβRII homodimers, which then form complexes with TβRI homodimers. This oligoreceptor complex phosphorylates part of the Smad protein, which subsequently induces or inhibits many target genes. TGF-β binding also activates the Erk2, p38, and Jnk pathways via TAK1. Activated TGF-β activity includes proliferation, angiogenesis, and promotion or inhibition of many immune activities. Latent TGF-β binds to GARP on the surface of regulatory T cells and may directly produce its immunosuppressive activity.

Sequence: Amino acid sequence derived from Human TGF-β (Met 278-Ser 390)(P01137) was expressed with 6×His tag at the C-terminus.

Protein length: The protein has a calculated MW of 13.7 kDa.

Biological Activity: Measured by its ability to inhibit the IL-4 dependent proliferation in HT-2 cells. The ED_{50} for this effect is <0.1 ng/mL.

Endotoxin: <0.1 EU per 1 μg of the protein by the LAL method.

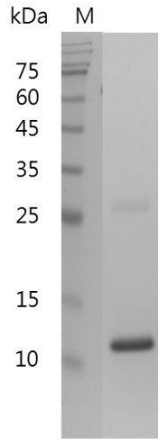
Formulation: Lyophilized from 20 mM sodium citrate, 0.2 M NaCl, pH 4.5.

Storage Instructions: Lyophilized protein product should be stored desiccated below -18°C. Upon reconstitution, the protein should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a

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carrier protein. (5% HSA , 10%FBS or 0.1%BSA). Please prevent freeze-thaw cycles.

Usage notes: Always centrifuge tubes before opening. It is recommended to reconstitute the lyophilized recombinant human TGF-β protein to a concentration of 0.1-1 mg/mL in 10 mM HCl, and keep at room temperature for at least 20 min to fully dissolve. Please avoid vortex vigorously.

	Fig. SDS-PAGE analysis of Human TGF-β protein.

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