Recombinant Human TGF beta 3 protein(His Tag)

Catalog Number:PKSH034198

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

Description

Synonyms	ARVD;ARVD1;LDS5;RNHF;TGFB3;TGF-B3
Species	Human
Expression Host	E.coli
Sequence	Ala 301-Ser 412
Accession	P10600
Calculated Molecular Weight	13.7 kDa
Observed molecular weight	13 kDa
Tag	C-His

Properties

Purity	> 98 % as determined by reducing SDS-PAGE.
Endotoxin	< 0.1 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℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 20 mM sodium citrate, 0.2 M NaCl, pH 3.5. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 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.

Background

TGF?-beta 3 (transforming growth factor-beta 3) is a member of a TGF?-beta superfamily subgroup that is defined by their structural and functional similarities. TGF-beta 3 and its closely related proteins, TGF-beta 1 and ? beta 2, act as cellular switches to regulate immune function, cell proliferation, and epithelial-?mesenchymal transition. The non-redundant biological effects of TGF-? beta 3 include involvement in palatogenesis, chondrogenesis, and pulmonary development. Rat TGF?-beta 3 cDNA encodes a 412 amino acid (aa) precursor that contains a 23 aa signal peptide and a 389 aa proprotein. TGF-beta 3 is secreted as a latent complex. This latent form of TGF-beta 3 is activated by integrins, thrombospondin-1, plasmin, and matrix metalloproteases. It can also be activated by extreme pH and reactive oxygen species. TGF-beta 3 binds with high affinity to TGF-beta RII, a type II serine/threonine kinase receptor. This receptor then phosphorylates and activates type I serine/threonine kinase receptors, TGF-? beta RI or ALK-?1, to modulate transcription through Smad phosphorylation. The divergent biological effects exerted by individual TGF-beta isoforms is dependent upon the recruitment of co-receptors (TGF-? beta RIII and endoglin) and the subsequent initiation of Smad--dependent or -independent signaling pathways.

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