Data Sheet (Cat.No.TMPY-01009)

TargetMol

TGFBI Protein, Human, Recombinant (His)

General Information

Synonyms:	CDG2;CSD;EBMD;CSD1;CDGG1;CSD3;transforming growth factor, beta-induced, 68kDa;LCD1;BIGH3;CDB1;transforming growth factor, β-induced, 68kDa;CSD2
Protein Construction:	A DNA sequence encoding the extracellular domain of human beta IG-H3 (NP_000349.1) precursor (Met 1-His 683) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Gly 24
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q15582
Molecular Weight:	74 kDa (predicted); 65 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 75 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a sodium citrate buffer system at pH 6. 0.Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

TGFBI is an RGD-containing protein that binds to type I, II and IV collagens. The RGD motif is found in many extracellular matrix proteins modulating cell adhesion and serves as a ligand recognition sequence for several integrins. TGFBI plays a role in cell-collagen interactions and may be involved in endochondral bone formation in

cartilage. TGFBI is induced by transforming growth factor-beta and acts to inhibit cell adhesion. Mutations in TGFBI are associated with multiple types of corneal dystrophy. TGFBI can bind to type I, II, and IV collagens. This adhesion protein may play an important role in cell-collagen interactions. In cartilage, TGFBI may be involved in endochondral bone formation. Loss of the TGFBI is sufficient to induce specific resistance.

Reference

Kannabiran C, et al. (2006) TGFBI gene mutations in corneal dystrophies. Hum Mutat. 27(7): 615-25.