

## SOST Protein, Human, Recombinant (His), Biotinylated

### General Information

Synonyms:	VBCH;SOST1;DAND6;sclerostin;CDD
Protein Construction:	A DNA sequence encoding the SOST (NP_079513.1) (Gln24-Tyr213) was expressed with a polyhistidine tag at the N-terminus. The purified protein was biotinylated in vitro. Predicted N terminal: His
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9BQB4-1
Molecular Weight:	22.5 kDa (predicted)

### QC Testing

Biological Activity:	Immobilized Recombinant Human Sclerostin/SOST Protein (His Tag), Biotinylated (Cat#TMPY-05113) at 2 µg/mL (100 µl/well) on Streptavidin precoated (2 µg/mL, 100 µL/well) can bind Human LRP-6 (20-630) Protein, Mouse IgG2a Fc Tag, the EC50 is 20-60 ng/mL (Routinely tested).
Purity:	> 90 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing Sterile PBS. 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:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### 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

Sclerostin, the protein product of the SOST gene, is a potent inhibitor of bone formation. Sclerostin protein is widely expressed at low levels with highest levels in bone, cartilage, kidney, liver, bone marrow and primary

osteoblasts differentiated for 21 days, and was originally identified as an important regulator of bone remodeling, homeostasis, and links bone resorption and bone apposition. Recent studies have revealed that Sclerostin protein inhibits the bone growth probably by binding to the extracellular domain of the Wnt coreceptors LRP5 and LRP6 and disrupting Wnt-induced Frizzled-LRP complex formation.

### Reference

- Bellido T. (2006) Downregulation of SOST/sclerostin by PTH: a novel mechanism of hormonal control of bone formation mediated by osteocytes. *J Musculoskelet Neuronal Interact.* 6(4): 358-9.
- van Bezooijen RL, et al. (2007) SOST expression is restricted to the great arteries during embryonic and neonatal cardiovascular development. *Dev Dyn.* 236(2): 606-12.

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