

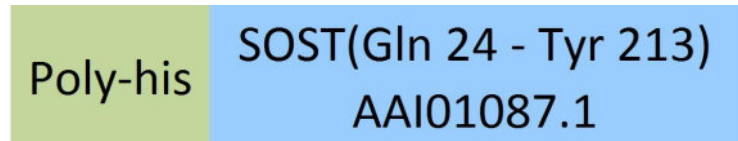
**Synonym**

SOST,VBCH

**Source**

Biotinylated Human SOST, His Tag, primary amine labeling(SOT-H8245) is expressed from human 293 cells (HEK293). It contains AA Gln 24 - Tyr 213 (Accession # [AAI01087.1](#)).

Predicted N-terminus: His

**Molecular Characterization**

This protein carries a polyhistidine tag at the N-terminus

The protein has a calculated MW of 22.3 kDa. The protein migrates as 25-35 kDa under reducing (R) condition (SDS-PAGE) due to different glycosylation.

**Labeling**

*The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with biotins using standard chemical labeling method. A standard biotin reagent (13.5 angstroms) is used in this product.*

**Protein Ratio**

Passed as determined by the HABA assay / binding ELISA.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**Purity**

>95% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

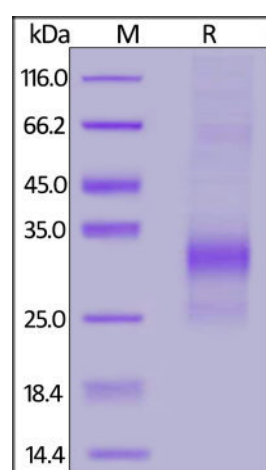
**Storage**

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

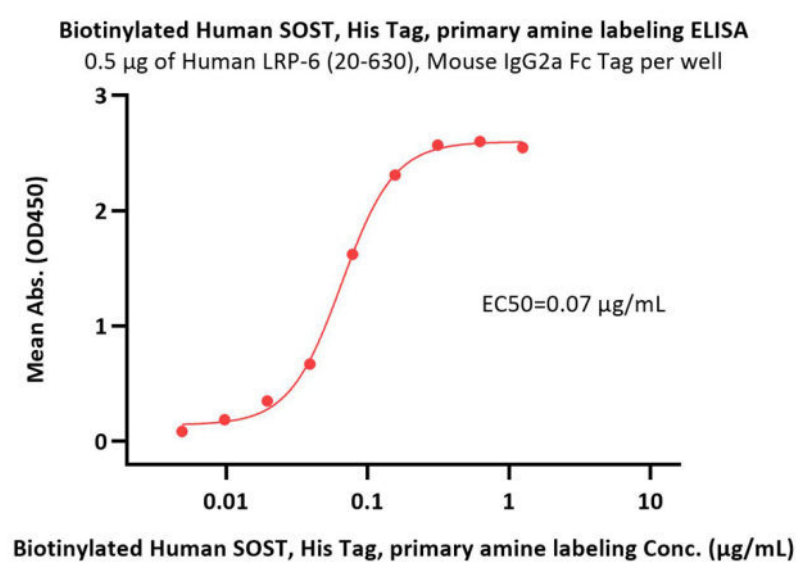
This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**

Biotinylated Human SOST, His Tag, primary amine labeling on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

**Bioactivity-ELISA**



Immobilized Human LRP-6 (20-630), Mouse IgG2a Fc Tag (Cat. No. LR6-H5253) at 5 µg/mL (100 µL/well) can bind Biotinylated Human SOST, His Tag, primary amine labeling (Cat. No. SOT-H8245) with a linear range of 0.005-0.313 µg/mL (QC tested).

## Background

Sclerostin (SOST) is also known as Sclerosteosis, VBCH, is a secreted glycoprotein with a signal peptide for secretion and a C-terminal cysteine knot-like (CTCK) domain and belongs to the Cerberus/DAN family of bone morphogenetic protein (BMP) antagonists. Sclerostin is produced by the osteocyte and has anti-anabolic effects on bone formation. More recently Sclerostin has been identified as binding to LRP5/6 receptors and inhibiting the Wnt signalling pathway. Wnt pathway inhibition under these circumstances is antagonistic to bone formation (meaning Sclerostin antagonizes bone formation). It has been shown that SOST binds BMP-5, -6, and -7 with high affinity and BMP-2 and -4 with low affinity. Sclerostin production by osteocytes is inhibited by parathyroid hormone, mechanical loading and cytokines including oncostatin M, cardiotrophin-1 and leukemia inhibitory factor. Sclerostin production is increased by calcitonin. Thus, osteoblast activity is self regulated by a negative feedback system. Mutations of Sclerostin is associated with the syndrome Sclerosteosis, and reduced sclerostin expression results in a milder form of the disorder called van Buchem disease.

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.