Human R-Spondin 1 / RSPO1 (21-146) Protein, Fc Tag

Catalog # RS1-H5269

Synonym

RSPO1,CRISTIN3,FLJ40906,RP11-566C13.1,R-spondin-1

Source

Human R-Spondin 1 (21-146), Fc Tag(RS1-H5269) is expressed from human 293 cells (HEK293). It contains AA Ser 21 - Ala 146 (Accession # Q2MKA7-1).
Predicted N-terminus: Ser 21

Molecular Characterization

R-Spondin 1(Ser 21 - Ala 146) Q2MKA7-1	Fc(Pro 100 - Lys 330) P01857

This protein carries a human IgG1 Fc tag at the C-terminus

The protein has a calculated MW of 40.2 kDa. The protein migrates as 46-56 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

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 52 mM Tris, 100 mM Glycine, 25 mM Arginine, 150 mM NaCl, pH7.5 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

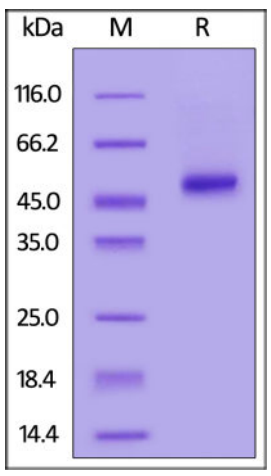
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

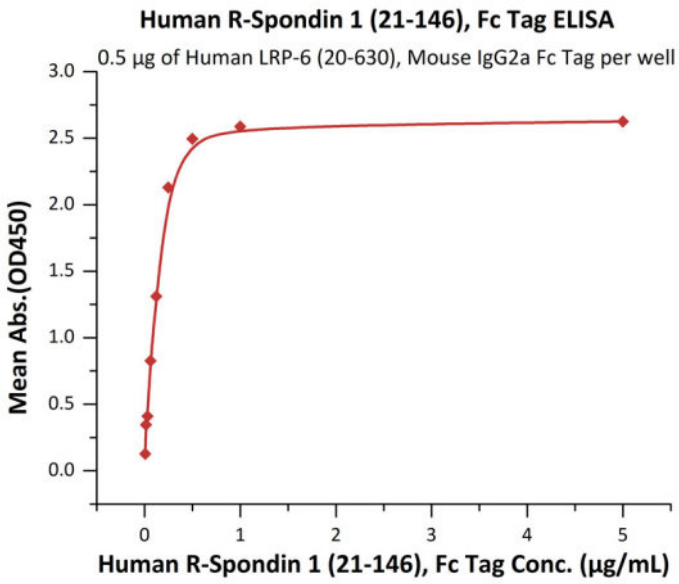
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

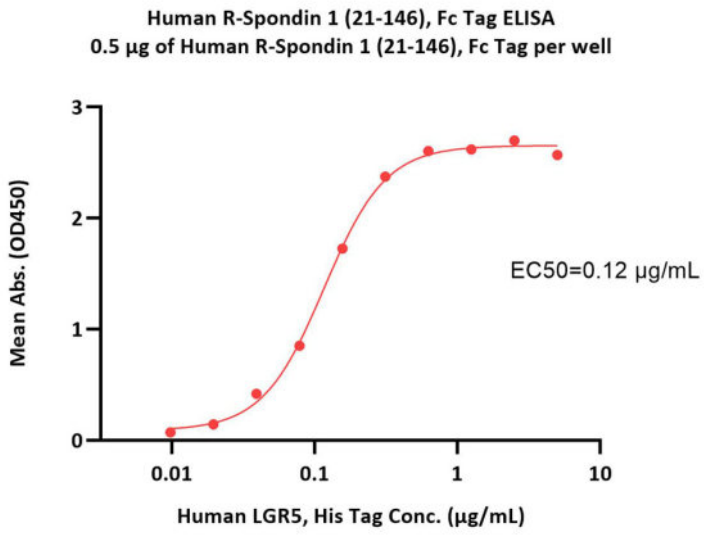


Human R-Spondin 1 (21-146), Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA

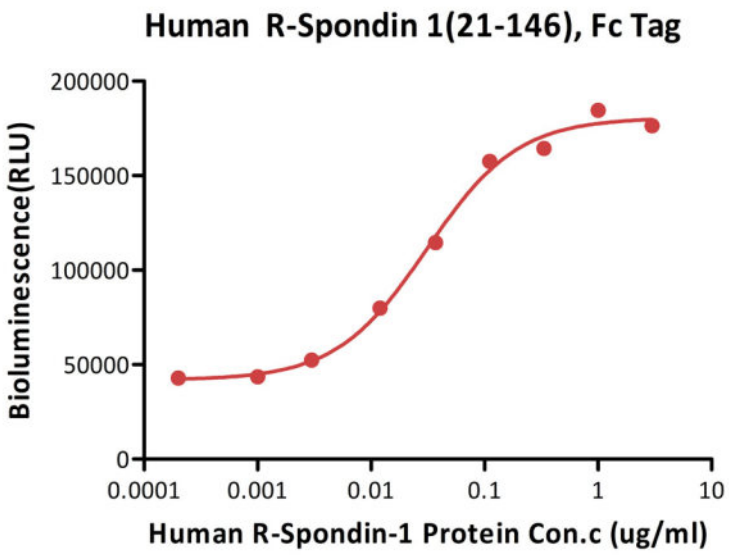


Immobilized Human LRP-6 (20-630), Mouse IgG2a Fc Tag (Cat. No. LR6-H5253) at 5 μg/mL (100 μL/well) can bind Human R-Spondin 1 (21-146), Fc Tag (Cat. No. RS1-H5269) with a linear range of 0.008-0.5 μg/mL (QC tested).



Immobilized Human R-Spondin 1 (21-146), Fc Tag (Cat. No. RS1-H5269) at 5 μg/mL (100 μL/well) can bind Human LGR5, His Tag (Cat. No. LG5-H52H3) with a linear range of 0.02-0.313 μg/mL (Routinely tested).

Bioactivity-Bioactivity CELL BASE



Human R-Spondin 1 (21-146), Fc Tag (Cat. No. RS1-H5269) induced TCF reporter activity in HEK293 cells. The EC50 for this effect is 0.0311 μg/mL (Routinely tested).

Background

R-spondin-1 is also known as Roof plate-specific Spondin 1 (RSPO1) and cysteinerich and single thrombospondin domain containing protein 3 (Cristin 3), which is a secreted protein which belongs to the R-Spondin family and encodes a secreted activator protein with two cystein-rich, furin-like domains and one thrombospondin type 1 domain. All Rspondins regulate Wnt/β-catenin signaling, but have distinct expression patterns. Like other R-Spondins, R-Spondin-1 contains two adjacent cysteinerich furinlike domains (aa 34-135) with one potential N-glycosylation site, followed by a thrombospondin (TSP1) motif (aa 147-207) and a region rich in basic residues (aa 211-263). Only the furinlike domains are needed for β-catenin stabilization. A putative nuclear localization signal at the C-terminus may allow some expression in the nucleus.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.