



Synonym

RSPO3,CRISTIN1,PWTSR,THSD2

Source

Human R-Spondin 3 Protein, Fc Tag(RS3-H5253) is expressed from human 293 cells (HEK293). It contains AA Gln 22 - His 272 (Accession # [Q9BXY4-1](#)).

Predicted N-terminus: Gly

Molecular Characterization

| | |
|---|---------------------------------|
| R-Spondin 3(Gln 22 - His 272) Q9BXY4-1 | 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 54.9 kDa. The protein migrates as 55-70 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in 50 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

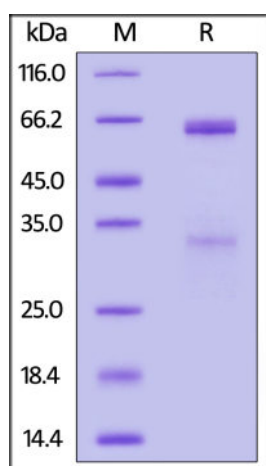
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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

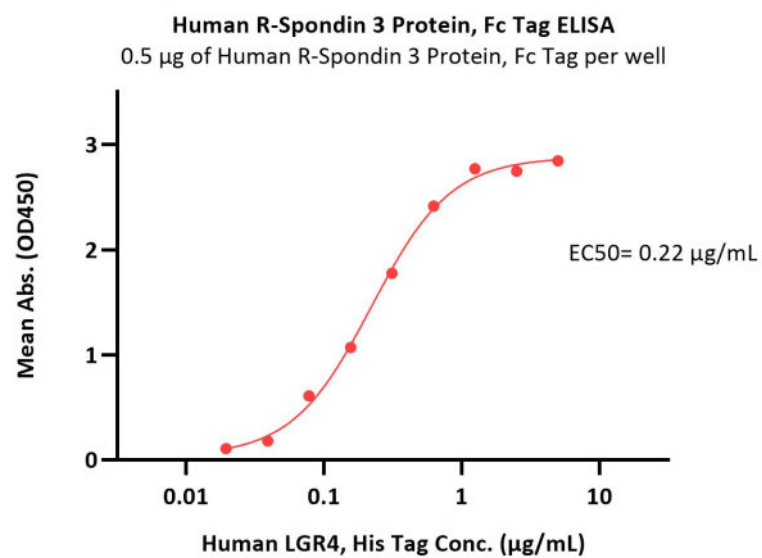


Human R-Spondin 3 Protein, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

Bioactivity-ELISA

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Immobilized Human R-Spondin 3 Protein, Fc Tag (Cat. No. RS3-H5253) at 5 µg/mL (100 µL/well) can bind Human LGR4, His Tag (Cat. No. LG4-H52H3) with a linear range of 0.02-0.625 µg/mL (QC tested).

Background

R-Spondin 3 (RSPO3) is also called cysteine-rich and single thrombospondin domain containing-1 (CRISTIN1), Protein with TSP type-1 repeat (PWTSR), is a member of the R-spondin protein family. R-spondins (RSPO) are a recently discovered secretory protein family with four members in human and mouse. Although all four RSPO proteins activate the canonical Wnt pathway, RSPO2 and RSPO3 are more potent than RSPO1, whereas RSPO4 is relatively inactive. RSPO-3 is expressed ubiquitously and expressed at higher level in placenta, small intestine, fetal thymus and lymph node. RSPO3 is the activator of the beta-catenin signaling cascade, leading to TCF-dependent gene activation. RSPO3 acts both in the canonical Wnt/beta-catenin-dependent pathway and in non-canonical Wnt signaling pathway, probably by acting as an inhibitor of ZNRF3, an important regulator of the Wnt signaling pathway. RSPO3 also acts as a ligand for frizzled FZD8 and LRP6 and may negatively regulate the TGF-beta pathway.

Clinical and Translational Updates

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