# Datasheet

## Human R-Spondin 1 / RSPO1 Protein

**Catalog #** AMS.RS1-H4221

**For Research and Further Cell Culture Manufacturing Use**

## Description

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|---|---|
| **Source** | Human R-Spondin 1 / RSPO1 Protein (Human R-Spondin 1, His Tag) Ser 21 - Ala 263 (Accession # AAI14967) was produced in human 293 cells (HEK293) |
| **Predicted N-terminus** | Ser 21 |
| **Molecular Characterization** | Human R-Spondin 1, His Tag is fused with a polyhistidine tag at the C-terminus, and has a calculated MW of 27.6 kDa. The predicted N-terminus is Ser 21 . The reducing (R) protein migrates as 40 kDa in 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 and Storage

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| **Formulation** | Lyophilized from 0.22 μm filtered solution in PBS, pH7.4. Normally Mannitol or Trehalose are added as protectants before lyophilization.<br>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.<br>No activity loss was observed after storage at:<br>• 4-8℃ for 12 months in lyophilized state;<br>• -70℃ for 3 months under sterile conditions after reconstitution. |

## Background

**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.

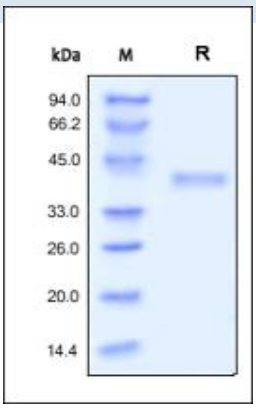
**References**


(1) Chen, JZ. et al. ,2002, Mol Biol Rep. 2002;29:287.
(2) Kim, K.A. et al., 2006, Cell Cycle. 2006;5:23–26.
(3) Nam, J.S. et al., 2007, Gene Expr. Patterns 7, 306–312.
(4) Kazanskaya, O. et al., 2004, Dev. Cell 7:525.
(5) Kamata, T. et al., 2004, Biochim. Biophys. Acta 1676 (1): 51–62.
(6) Binnerts, M.E. et al., 2007, Proc. Natl. Acad. Sci. U.S.A. 104 (37): 14700–5.
(7) Wei, Q. et al., 2007, J Biol Chem 282:15903–15911.


## Assay Data

### SDS-PAGE Data

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





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