

# Datasheet

## Human R-Spondin 1 / RSPO1 Protein

Catalog # AMS.RS1-H4221-1MG

For Research and Further Cell Culture Manufacturing Use

### Description

|                                   |   |
|-----------------------------------|---|
| <b>Source</b>                     | 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)   |
| <b>Predicted N-terminus</b>       | Ser 21  |
| <b>Molecular Characterization</b> | 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. |
| <b>Endotoxin</b>                  | Less than 1.0 EU per µg by the LAL method.  |
| <b>Purity</b>                     | >95% as determined by SDS-PAGE.   |

### Formulation and Storage

|                       |   |
|-----------------------|---|
| <b>Formulation</b>    | 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.  |
| <b>Reconstitution</b> | Please see Certificate of Analysis for specific instructions. For best performance, we strongly recommend you to follow the reconstitution protocol provided in the COA.  |
| <b>Storage</b>        | 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: <ul style="list-style-type: none"> <li>• 4-8°C for 12 months in lyophilized state;</li> <li>• -70°C for 3 months under sterile conditions after reconstitution.</li> </ul> |

### Background

|                   |  |
|-------------------|--|
| <b>Background</b> | R-spondin-1 is also known as Roof plate-specific Spondin 1 (RSPO1) and cysteine-rich 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 cysteine-rich, furin-like domains and one thrombospondin type 1 domain. All R-spondins regulate Wnt/β-catenin signaling, but have distinct expression patterns. Like other R-Spondins, R-Spondin-1 contains two adjacent cysteine-rich 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. |
|-------------------|--|

Please contact us at [info@amsbio.com](mailto:info@amsbio.com), if you have any questions about this product.

### References

- (1) Chen, J.Z. 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.
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- (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.

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# Datasheet

## Human R-Spondin 1 / RSPO1 Protein

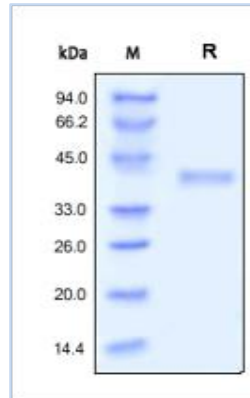
Catalog # AMS.RS1-H4221-1MG

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### 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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