

## Active Recombinant Human RSPO1 Protein, Pre-aliquoted

Cat. No. RSPO1-28H    Lot. No. (See product label)

### SPECIFICATION

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Overview             | Recombinant Human RSPO1 Protein, Arg31 - Ala263, was expressed in CHO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Species                      | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Source                       | CHO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| ProteinLength                | Arg31-Ala263                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Description                  | This gene encodes a secreted activator protein with two cysteine-rich, furin-like domains and one thrombospondin type 1 domain. The encoded protein is a ligand for leucine-rich repeat-containing G-protein coupled receptors (LGR proteins) and positively regulates the Wnt signaling pathway. In mice, the protein induces the rapid onset of crypt cell proliferation and increases intestinal epithelial healing, providing a protective effect against chemotherapy-induced adverse effects. Alternative splicing results in multiple transcript variants. |
| Bio-activity                 | Measured by its ability to induce Topflash reporter activity in HEK293T human embryonic kidney cells. The ED50 for this effect is 1.0-4.0 ng/mL in the presence of 5 ng/mL Recombinant Mouse Wnt-3a.                                                                                                                                                                                                                                                                                                                                                              |
| Molecular Mass               | Predicted Molecular Mass:25.6 kDa<br>SDS-PAGE: 39 kDa, reducing conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| N-terminal Sequence Analysis | Ser21 & Arg31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Endotoxin</b>      | < 0.10 EU/μg of the protein by the LAL method.                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Purity</b>         | > 90% by SDS-PAGE under reducing conditions and visualized by silver stain.                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Stability</b>      | <p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> <li>• 6 months from date of receipt at room temperature as supplied.</li> <li>• 12 months from date of receipt at 2-8 centigrade as supplied.</li> <li>• 1 month at 2-8 centigrade under sterile conditions after reconstitution.</li> <li>• 3 months at -20 to -80 centigrade under sterile conditions after reconstitution.</li> </ul> |
| <b>Reconstitution</b> | For a stock solution, reconstitute at 100 μg/mL in sterile PBS. For immediate use, simply roll Pre-aliquoted directly into cell culture medium.                                                                                                                                                                                                                                                                                                        |
| <b>Shipping</b>       | The product is shipped at ambient temperature.                                                                                                                                                                                                                                                                                                                                                                                                         |

## GENE INFORMATION

|                        |                                                                                                   |
|------------------------|---------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | RSPO1 R-spondin 1 [ Homo sapiens (human) ]                                                        |
| <b>Official Symbol</b> | RSPO1                                                                                             |
| <b>Synonyms</b>        | RSPO1; R-spondin 1; RSPO; CRISTIN3; R-spondin-1; R-spondin homolog; roof plate-specific spondin-1 |
| <b>Gene ID</b>         | 284654                                                                                            |
| <b>mRNA Refseq</b>     | NM_001038633                                                                                      |
| <b>Protein Refseq</b>  | NP_001033722                                                                                      |
| <b>MIM</b>             | 609595                                                                                            |

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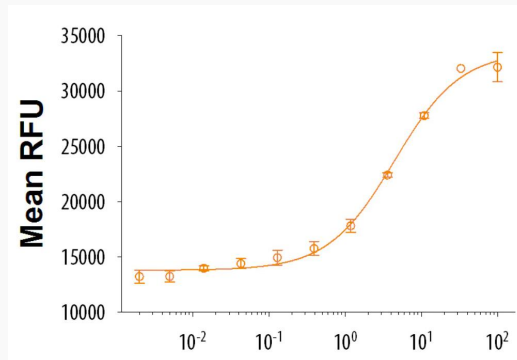
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UniProt ID

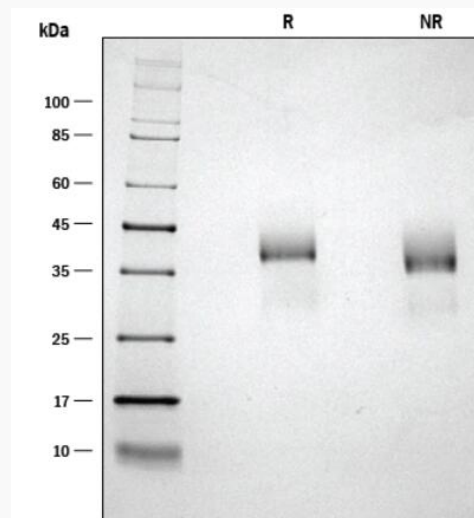
Q2MKA7

Bio-activity



Recombinant Human R-Spondin 1, in the presence of Recombinant Mouse Wnt-3a (5 ng/mL), induces activation of beta-catenin in HEK293T cells measured using the Topflash assay.

SDS-PAGE



1 µg/lane of Recombinant Human R-Spondin 1 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized with silver staining,

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showing a single band at 39 kDa.

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