Human R-Spondin 1 / RSPO1 Protein

Catalog Number: **11083-HNAS**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CRISTIN3; R-Spondin 1; RSPO

Protein Construction:

A DNA sequence encoding the human RSPO1 (NP_001033722.1) (Met1-Ala263) was expressed and purified.

Source: Human

Expression Host: CHO Stable Cells

QC Testing

Purity: ≥ 95 % as determined by SDS-PAGE. ≥95% as determined by SEC-HPLC

Endotoxin:

< 10 EU per mg protein.

Predicted N terminal: Ser 21

Molecular Mass:

The recombinant human RSPO1 consists of 243 amino acids and has a predicted molecular mass of 26.8 kDa. As a result of glycosylation, the apparent molecular mass of it is approximately 40 and 31 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, PH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Bio Activity:

1.Measured by its ability to induce activation of ßcatenin response in a Topflash Luciferase assay using HEK293T human embryonic kidney cells. The ED50 for this effect is typically 10-80 ng/mL in the presence of 5 ng/mL recombinant mouse Wnt3a.
2.Human intestinal cancer organoids were cultured with RSPO1(Cat#11083-HNAS), EGF(Cat#50482-MNCH), NOG(Cat#50688-M02H). (Routinely tested). Data provided by D1 Medical Technology.
3.Human colorectum organoids were cultured with RSPO1(Cat#11083-HNAS), EGF(Cat#50482-MNCH), NOG(Cat#50688-M02H). (Routinely tested). Data provided by D1 Medical Technology.
4.Human lung cancer organoids were cultured with FGF2(Cat#10014-HNAE), FGF4(Cat#16043-HNAE), FGF7(Cat#10210-H07E), EGF(Cat#50482-MNCH), FGF10(Cat#10573-HNAE), NOG(Cat#50688-M02H), RSPO1(Cat#11083-HNAS). (Routinely tested). Data provided by D1 Medical Technology.
5.Human lung organoids were cultured with FGF2(Cat#10014-HNAE), FGF4(Cat#16043-HNAE), FGF7(Cat#10210-H07E), EGF(Cat#50482-MNCH), FGF10(Cat#10573-HNAE), NOG(Cat#50688-M02H), RSPO1(Cat#11083-HNAS). (Routinely tested). Data provided by D1 Medical Technology.
6.Human cholangiocarcinomas organoids were cultured with FGF2(Cat#10014-HNAE), HGF(Cat#10463-HNAS), FGF7(Cat#10210-H07E), EGF(Cat#50482-MNCH), FGF10(Cat#10573-HNAE), NOG(Cat#50688-M02H), RSPO1(Cat#11083-HNAS). (Routinely tested). Data provided by D1 Medical Technology.
7.Human liver cancer organoids were cultured with FGF2(Cat#10014-HNAE), HGF(Cat#10463-HNAS), FGF7(Cat#10210-H07E), EGF(Cat#50482-MNCH), FGF10(Cat#10573-HNAE), TGFB1(Cat#10804-HNAC), NOG(Cat#50688-M02H), RSPO1(Cat#11083-HNAS). (Routinely tested). Data provided by D1 Medical Technology.
8.Human kidney cancer organoids were cultured with FGF2(Cat#10014-HNAE), FGF7(Cat#10210-H07E), EGF(Cat#50482-MNCH), FGF10(Cat#10573-HNAE), NOG(Cat#50688-M02H), RSPO1(Cat#11083-HNAS). (Routinely tested). Data provided by D1 Medical Technology.
9.Human kidney organoids were cultured with FGF7(Cat#10210-H07E), EGF(Cat#50482-MNCH), FGF10(Cat#10573-HNAE), NOG(Cat#50688-M02H), RSPO1(Cat#11083-HNAS), HGF(Cat#10463-HNAS), FGF4(Cat#16043-HNAE). (Routinely tested). Data provided by D1 Medical Technology.
10.Human gastric cancer organoids were cultured with EGF(Cat#50482-MNCH), FGF10(Cat#10573-HNAE), NOG(Cat#50688-M02H), RSPO1(Cat#11083-HNAS). (Routinely tested). Data provided by D1 Medical Technology.
11.Human stomach organoids organoids were cultured with EGF(Cat#50482-MNCH), FGF10(Cat#10573-HNAE), NOG(Cat#50688-M02H), RSPO1(Cat#11083-HNAS). (Routinely tested). Data provided by D1 Medical Technology.
12.Human breast cancer organoids were cultured with FGF7(Cat#10210-H07E), RSPO1(Cat#11083-HNAS), IGF1(Cat#10598-HNAE), EGF(Cat#50482-MNCH), NRG1 Beta 1(Cat#11609-H01H), NOG(Cat#50688-M02H). (Routinely tested). Data provided by D1 Medical Technology.
13.Human ovarian organoids were cultured with IGF1(Cat#10598-HNAE), NRG1 Beta 1(Cat#11609-H01H), RSPO1(Cat#11083-HNAS), EGF(Cat#50482-MNCH), NOG(Cat#50688-M02H). (Routinely tested). Data provided by D1 Medical Technology.

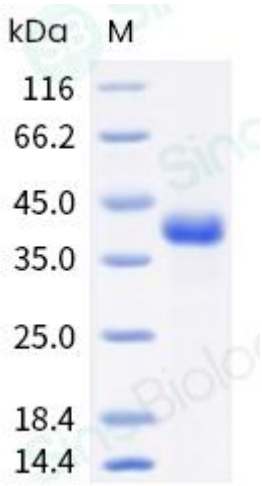
Human R-Spondin 1 / RSPO1 Protein

Catalog Number: **11083-HNAS**

Sino Biological
Biological Solution Specialist

General Information

SDS-PAGE:



Protein Description

RSPO1 gene is a member of the R-spondin family. It encodes RSPO1 which is known as a secreted activator protein with two cystein-rich, furin-like domains and one thrombospondin type 1 domain. In mice, RSPO1 induces the rapid onset of crypt cell proliferation and increases intestinal epithelial healing, providing a protective effect against chemotherapy-induced adverse effects. This protein is an activator of the beta-catenin signaling cascade, leading to TCF-dependent gene activation. RSPO1 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. It also acts as a ligand for frizzled FZD8 and LRP6.

References

1.Kamata T, et al. (2004) R-spondin, a novel gene with thrombospondin type 1 domain, was expressed in the dorsal neural tube and affected in Wnts mutants. Biochim Biophys Acta. 1676(1):51-62.
2.Ota T, et al. (2004) Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat Genet. 36(1):40-5.
3.Strausberg RL, et al. (2003) Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Proc Natl Acad Sci. 99(26):16899-903.