

## Product Description

**Alternate Names:** hRspo1, Roof plate-specific spondin-1

**Accession/Uniprot Number:** Q2MKA7

**Description:** R-Spondin-1 (RSPO-1) is a secreted growth factor that stabilizes  $\beta$ -catenin and enhances WNT signaling. RSPO-1 is expressed in many tissues and regulates female sex determination, XX gonad development, oocyte differentiation, and hematopoietic stem cell specification. The RSPO-1 stabilization of  $\beta$ -catenin promotes intestinal crypt cell proliferation. This suggests that RSPO-1 functions as a stem cell growth factor and may have therapeutic potential in the treatment of gastrointestinal diseases and chemotherapy-induced intestinal mucositis. Additionally, recombinant RSPO-1 protein is used to initiate and maintain intestinal organoid cultures.

**Source:** Genetically modified CHO cells.

**Predicted MW:** Monomer, 25.6 kDa (233 amino acids)

**AA Sequence:** RISAEGSQAC AKGCELCSEV NGCLKCSPKL FILLERNDIR QVGVCLPSCP PGYFDARNPD MNKCIKCKIE HCEACFSHNF CTKCKEGLYL HKGRCPACP EGSSAANGTM ECSSPAQCEM SEWSPWGPCS KKQQLCGFRR GSEERTRRVL HAPVGDHAAC SDTKETRRT VRRVPCPEGQ KRRKGGQGR ENANRNLARK ESKEAGAGSR RRGKQQQQQ QGTVGPLTSA GPA

**Formulation:** Lyophilized from a sterile (0.2 micron) filtered aqueous solution containing phosphate buffered saline (PBS)

## Product Specifications

Specification	Method of Determination	Acceptance Criteria	Result
Purity	Reducing and Non-reducing SDS-PAGE	$\geq 95\%$	>95%
Endotoxin	Kinetic LAL (50% confidence)	$\leq 1$ EUs/ug	<0.050 EUs/ug
Biological Activity	Luciferase Induction in HEK-293 STF cells in the presence of Murine Wnt-3a	ED50 $\leq 50$ ng/mL ( $\geq 2.0 \times 10^4$ units/mg)	ED50 = 24.7 ng/mL ( $4.0 \times 10^4$ units/mg)

## Product Preparation and Storage

**Country of Origin:** USA

**Shipping:** Room temperature

**Storage Prior to Reconstitution:**  $-20^\circ\text{C}$

**Reconstitution:** Sterile water at 0.1 mg/mL

**Date of Recon.:** \_\_\_\_\_

**Initials:** \_\_\_\_\_

Centrifuge vial before opening. Suspend the product by gently pipetting the above recommended solution down the sides of the vial. DO NOT VORTEX. Allow several minutes for complete reconstitution. For prolonged storage, dilute to working aliquots in a 0.1% BSA solution, store at  $-80^\circ\text{C}$ , and avoid repeat freeze thaws.

**Expiration Date:**

**Date Received:** \_\_\_\_\_

12 months from date of receipt when stored at  $-20^\circ\text{C}$  to  $-80^\circ\text{C}$  as supplied.

1 month when stored at  $4^\circ\text{C}$  after reconstituting as directed.

3 months when stored at  $-20^\circ\text{C}$  to  $-80^\circ\text{C}$  after reconstituting as directed.

*Jane Charles (2019-01-21)*

QA Reviewer (YYYY-MM-DD)

*Olivia Schneider, PhD (2019-01-30)*

QC Reviewer (YYYY-MM-DD)

**THIS PRODUCT IS FOR RESEARCH USE ONLY AND IS NOT FOR USE IN HUMANS!**