

# Recombinant Human RSPO1

P00147

## Description

- **Synonyms** : RSPO1; R-spondin; RP11-566C13.1; Roof plate- specific spondin-1
- **Species** : Human
- **Expression Host** : E. coli
- **Accession** : Q2MKA7
- **Mol Mass** : 7.2 kDa
- **Tag** : 6-His

## Formulation

- Lyophilized from a 0.2µm filtered solution of PBS, 4% Mannitol pH 7.4.

## Storage

- lyophilized proteins should be stored at < -20°C.
- Reconstituted protein solution can be stored at 4 -7°C for 2-7 days.
- Aliquots of reconstituted samples are stable at < -20°C for 3 months.

## Reconstitution

- The vial be centrifuged to opening to bring the contents to the bottom, Don't mix by vortex
- It is not recommended to reconstitute to a concentration less than 100µg/mL.
- Dissolve the lyophilized protein in distilled water.
- Aliquot the reconstituted solution to minimize free-thaw cycle.

## Quality Control

- **Purity**: > 95 % as determined by reducing SDS-PAGE.
- **Endotoxin**: < 0.1 EU/µg as determined by the LAL method.
- **Mol Mass**: 27.8 KDa
- **AP Mol Mass**: 40 KDa, reducing conditions.

## Background

RSPO1 is a secreted protein, containing 2 FU (furin-like) repeats and 1 TSP type-1 domain and belonging to the R-spondin family. RSPO1 is required for the early development of gonads, regardless of sex. It has been found in mice only eleven days after fertilization. To induce cell proliferation, it acts synergistically with WNT4. They help stabilize  $\beta$  catenin, which activates downstream targets. RSPO1 is necessary in female sex development. It augments the WNT/  $\beta$  catenin pathway to oppose male sex development. In critical gonadal stages, between six and nine weeks after fertilization, the ovaries upregulate it while the testes downregulate it. RSPO1 can potentially aid in the treatment of mucositis, which is characterized by inflammation of the oral cavity. This unfortunate condition often accompanies chemotherapy and radiation in cancer patients with head and neck tumors.

Please contact Origin Diagnostics and Research for further assistance

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