General Information

Gene Name Synonym:
CRISTIN3; R-Spondin 1; RSPO

Protein Construction:
A DNA sequence encoding the human RSPO1 (NP_001033722.1) (Met 1-Ala 263) was expressed and purified.

Source:
Human

Expression Host:
CHO Stable Cells

QC Testing

Purity:
(53.2+43.4) % as determined by SDS-PAGE

Bio Activity:
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 20-120 ng/mL in the presence of 5 ng/mL recombinant mouse Wnt3a.

Endotoxin:
< 1.0 EU per μg of the protein as determined by the LAL method

Stability:
Samples are stable for up to twelve months from date of receipt at -70 °C

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

Storage:
Store it under sterile conditions at -20°C to -80°C 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.

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