Mouse R-Spondin 1 / RSPO1 Protein (His Tag)

Catalog Number:  50316-M08S

General Information

Gene Name Synonym:
R-spondin; Rspondin

Protein Construction:
A DNA sequence encoding the full length of mouse RSPO1 (NP_619624.2) (Met 1-Gln 265) was fused with a polyhistidine tag at the C-terminus.

Source:  Mouse

Expression Host:  CHO Stable Cells

QC Testing

Purity:  > 95 % as determined by SDS-PAGE

Bio Activity:
Measured by its ability to induce activation of β-catenin response in a Topflash Luciferase assay using HEK293T human embryonic kidney cells. The ED50 for this effect is typically 0.1-0.9 μg/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 secreted recombinant mouse RSPO1 comprises 256 amino acids with a predicted molecular mass of 28.5 kDa. As a result of glycosylation, the apparent molecular mass of the protein is approximately 44 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.

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