

Human recombinant R-spondin 1 protein, AF

Catalog Number: PROTQ2MKA7-1

Overview

Product Name	Human recombinant R-spondin 1 protein, AF
Description	R-spondin 1 (RSPO1, Roof plate-specific Spondin 1) is a cysteine-rich secreted glycoprotein that belongs to the R-Spondin family. Structurally, R-spondin 1 harbors an N-terminal signal peptide, two cysteine-rich furin-like (FU1-FU2) domains, a thrombospondin (TSP) domain, and a basic amino acid-rich (BR) C-terminal domain. R-spondin 1 acts as a ligand for the leucine-rich repeat-containing G-protein coupled receptor (LGR) family (LGR4/5/6), subsequent clearing negative regulators ZNRF3/RNF43 from the membrane, leading to the availability of Wnt receptor and activating Wnt/beta-catenin signaling. The signal cascade is essential for regulating stem cell proliferation, embryonic development, and tissue homeostasis.
Size	5ug,20ug,100ug
Tag	His-SUMO Tag (N-term)
Form	Liquid
Source	HEK293 cell
Formulation	Liquid (1X PBS, pH 7.4) If you have any concerns or special requirements, please confirm with us.

Storage

Store at 2°C to 8°C for up to 2 weeks, -20°C or -80°C for 6 months. Further dilute in a buffer containing a carrier protein or stabilizer (e.g. 0.1% BSA, 10%FBS, 5%HSA or 5% trehalose solution), protein aliquots should be stored at -20°C or -80°C for 3-6 months. Avoid repeated freeze/thaw cycles.

Purity

>95% as determined by SDS-PAGE.

Molecular weight

The protein has a calculated MW of 46.8 kDa. The protein migrates as 62-68 kDa under reducing condition (SDS-PAGE analysis).

Activity

R-Spondin-1 enhances BMP-2-mediated differentiation of MC3T3-E1 cells. The ED₅₀ for this effect is 1-3 ug/mL.

Endotoxin

<1 EU per 1 ug of the protein by the LAL method.

Amino Acid Sequence

A DNA sequence encoding Human R-Spondin 1 Protein (#Q2MKA7) (Ser21 - Ala263) was expressed with polyhistidine-SUMO tag at the N-terminus.

Reconstitution

Centrifuge at 3000 rpm for 5 mins before opening. Do Not Vortex! Vigorous shaking may impair the biological activity of the protein.

Usage

Boster's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

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