BOSTER BIOLOGICAL TECHNOLOGY
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Human recombinant R-spondin 1 protein, AF

Catalog Number: PROTQ2MKA7-1

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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 ED_{50} for this effect is 1-3 ug/mL.

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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.

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