R-spondin 1/RSPO1, Human, Recombinant

Cat. No. : PCK214

General Information

Synonyms	RSPO1;Roof plate-specific spondin-1
Species	Human
Expression host	HEK293
Sequence	A DNA sequence encoding Human R-Spondin 1 Protein (#Q2MKA7) (Ser21-Ala263) was expressed with polyhistidine-SUMO tag at the N-terminus.
Accession	Q2MKA7
Tag	His-SUMO tag at the N-terminus
Mol mass	42.43 kDa
Expiration date	12 months
Bio activity	R-Spondin-1 enhances BMP-2-mediated differentiation of MC3T3-E1 cells. The ED50 for this effect is 1-3 μg/mL.

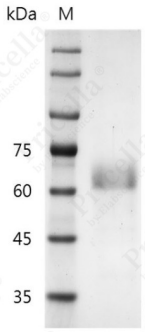
Product feature

Purity	> 95% as determined by SDS-PAGE. Ni-NTA chromatography.
Endotoxin (EU/μg)	< 0.1
Storage	Store at -5~-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 -5~-20°C or -80°C for 3-6 months.
Shipping	Ice bag
Formulation	Liquid (1 × PBS, pH 7.4)

Background

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/β-catenin signaling. The signal cascade is essential for regulating stem cell proliferation, embryonic development, and tissue homeostasis.

SDS-PAGE



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