

## R-spondin 1/RSP01, Human, Recombinant

Cat. No. : PCK214

### General Information

<b>Synonyms</b>	RSP01;Roof plate-specific spondin-1
<b>Species</b>	Human
<b>Expression host</b>	HEK293
<b>Sequence</b>	A DNA sequence encoding Human R-Spondin 1 Protein (#Q2MKA7) (Ser21-Ala263) was expressed with polyhistidine-SUMO tag at the N-terminus.
<b>Accession</b>	Q2MKA7
<b>Tag</b>	His-SUMO tag at the N-terminus
<b>Mol mass</b>	42.43 kDa
<b>Expiration date</b>	12 months
<b>Bio activity</b>	R-Spondin-1 enhances BMP-2-mediated differentiation of MC3T3-E1 cells. The ED50 for this effect is 1-3 µg/mL.

### Product feature

<b>Purity</b>	> 95% as determined by SDS-PAGE. Ni-NTA chromatography.
<b>Endotoxin (EU/µg)</b>	< 0.1
<b>Storage</b>	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.
<b>Shipping</b>	Ice bag
<b>Formulation</b>	Liquid (1 × PBS, pH 7.4)

### Background

R-spondin 1 (RSP01, 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

