Recombinant Human RSPO1 Protein

Cat. No. RSPO1-34H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human R-spondin 1 protein without tag was expressed in E. coli. Animal-free (AOF) and carrier protein-free. Mass spectrometry: single species with expected mass. Analytical reversed-phase: single sharp peak. Recovery from stock vial: >95%
Species	Human
Source	E.coli
Description	This gene encodes a secreted activator protein with two cysteine-rich, furin-like domains and one thrombospondin type 1 domain. The encoded protein is a ligand for leucine-rich repeat-containing G-protein coupled receptors (LGR proteins) and positively regulates the Wnt signaling pathway. In mice, the protein induces the rapid onset of crypt cell proliferation and increases intestinal epithelial healing, providing a protective effect against chemotherapy-induced adverse effects. Alternative splicing results in multiple transcript variants.
Molecular Mass	13 kDa
Endotoxin	<0.005 EU/μg protein (below level of detection)
Applications	Neuronal Differentiation
Storage	Resuspend in 10mM HCl at >100 μg/mL, prepare single use aliquots, add carrier

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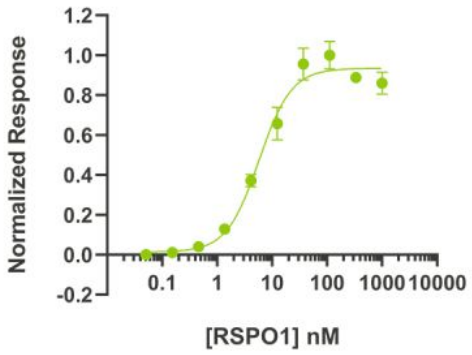
	protein if desired and store frozen at -20 or -80 centigrade
Storage Buffer	Lyophilized from acetonitrile, TFA

GENE INFORMATION

Gene Name	RSPO1 R-spondin 1 [Homo sapiens (human)]
Official Symbol	RSPO1
Synonyms	RSPO1; R-spondin 1; RSPO; CRISTIN3; R-spondin-1; R-spondin homolog; roof plate-specific spondin-1
Gene ID	284654
mRNA Refseq	NM_001038633
Protein Refseq	NP_001033722
MIM	609595
UniProt ID	Q2MKA7

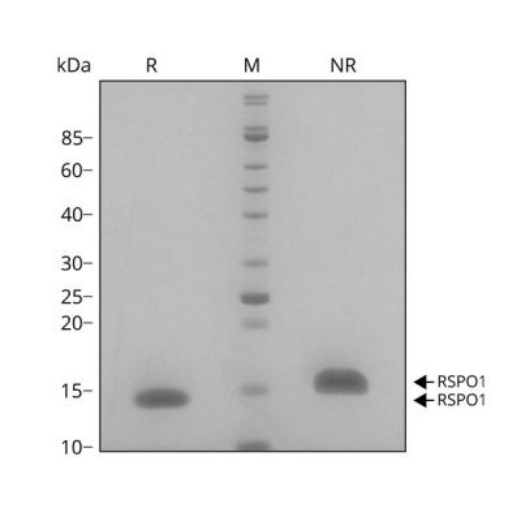
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Bioactivity



RSPO 1 enhances Wnt signalling in TOP-Flash reporter assay in Wnt reporter assay. HEK293T cells transfected with Wnt-responsive firefly luciferase reporter TOP-FLASH are treated with increasing concentration of R-spondin 1 (diluted in DMEM with 0.5 % of FCS), in the presence of Wnt-conditioned media (1: 8 dilution), in triplicate. Cells are grown overnight and luciferase activity measured by luminescence. RSP1 enhances Wnt-ß catenin signaling in HEK239T cells. EC50 = 72.4ng/mL (5.8 nM).

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Purity	 RSPO1 migrates as a single band at 16 kDa in non-reducingand 13 kDa in reducingconditions. Purified recombinant protein was resolved using 15% w/v SDS-PAGE in reducedand non-reduced conditionsand stained with Coomassie Brilliant Blue R250.

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