

Technical Data Sheet

Recombinant human R-spondin 1 protein



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Lot Specific Information

Lot Number: Lot Specific*

Total Protein: Lot Specific*

*This information will be noted on the certificate of analysis that ships with this product.

Shelf Life

This product has a guaranteed shelf-life of one year from the date of customer receipt when stored as recommended.

Product Website Link: <https://bioxcell.com/recombinant-human-r-spondin-1-protein-rp002>

Product Information

Catalog Number:	RP002
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Recommended Dilution Buffer:	InVivoPure Reconstitution Buffer A
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.5 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in 10 mM HCl (Reconstitution solution A) at >50 µg/ml. Once reconstituted, store in single-use aliquots to avoid freeze-thaw cycles. Store reconstituted protein at -20 °C to -80 °C for a maximum of 12 months or until the expiry date if sooner.
Sterility:	Sterile
Production:	Microbial. Expressed in E. coli
Molecular Weight:	13 kDa
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human R-spondin 1 (RSPO-1) protein is a secreted 263-amino-acid activator of the canonical Wnt signaling pathway, built from two cysteine-rich, furin-like domains plus a thrombospondin type 1 (TSP1) domain. By binding the leucine-rich repeat-containing G-protein coupled receptors LGR4–6, RSPO-1 stabilizes β-catenin and amplifies Wnt signaling, a pathway essential for cell proliferation, differentiation and migration. R-spondin 1 is critical for embryonic development and patterning of the gastrointestinal tract, neural tube, skin and limbs, for ovarian differentiation and female sex determination, and for stem cell self-renewal, tissue regeneration and repair. In cell culture it is widely used to maintain and expand intestinal, hematopoietic and epithelial stem cells and to grow stem cell-derived organoids of the intestine, pancreas, liver, colon and stomach. Because Wnt dysregulation and R-spondin 1 overexpression are associated with colon and ovarian cancers, RSPO-1 is also studied as a target in oncology and regenerative medicine. This protein is optimized for in vivo and functional applications: low-endotoxin, tag-free, and carrier-free, supporting reproducible performance in demanding preclinical and bioactivity studies. Species reactivity: human. Species similarity: mouse - 96%, rat - 96%, bovine - 94%, porcine - 98%.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at <https://bioxcell.com/faqs>.

Store lyophilized protein between -20 °C and -80 °C until the date of expiry. Avoid freeze-thaw cycles

Bio X Cell, LLC
<https://bioxcell.com>
+1-866-787-3444
customerservice@bioxcell.com

Conditions: For research use only. Not for use in diagnostic or therapeutic procedures.

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