

Recombinant Human RSPO1 Protein

Product Information

Product Name	Cat#	Size
Recombinant Human RSPO1 Protein	92278ES20	20 µg
	92278ES60	100 µg
	92278ES80	1 mg

Product Description

R-Spondin 1 (RSPO1, Roof plate-specific Spondin 1), also known as cysteine-rich and single thrombospondin domain containing protein 3, is a 27 kDa secreted protein that shares ~40% aa identity with three other R-Spondin family members. All R-Spondins regulate Wnt/ beta-Catenin signaling but have distinct expression patterns. In humans, rare disruptions of the R-Spondin 1 gene are associated with tendencies for XX sex reversal (phenotypic male) or hermaphroditism, indicating a role for R-Spondin 1 in gender. Injection of recombinant R-Spondin 1 in mice causes activation of beta-catenin and proliferation of intestinal crypt epithelial cells, and ameliorates experimental colitis. Interest in R-Spondin 1 as a cell culture supplement has grown with the expansion of the organoid field. R-Spondin 1 is widely used in organoid cell culture workflows as a vital component that promotes both growth and survival of 3D organoids.

Product Properties

Synonyms	R-Spondin 1 ; Roof Plate-specific Spondin 1
Accession	Q2MKA7
Source	CHO Stable Cells-derived human RSPO1 protein, Met1-Ala 263.
Molecular Weight	Approximately 26.8 kDa. As a result of glycosylation, the apparent molecular mass of it is approximately 40 and 31 kDa in SDS-PAGE under reducing conditions.
AA Sequence	MRLGLCVVAL VLSWTHLTIS SRGIKGRQR RISAEGSQAC AKGCELCSEV NGCLKCSPKL FILLERNDIR QVGVCLPSCP PGYFDARNPD MNKCIKCKIE HCEACFSHNF CTKCKEGLYL HKGRCYPACP EGSSAANGTM ECSSPAQCEM SEWSPWGPCS KKQQLCGFRR GSEERTRRVL HAPVGDHAAC SDTKETRRCT VRRVPCPEGQ KRRKGGQGRR ENANRNLARK ESKEAGAGSR RRKGGQQQQQ QGTVGPLTSA GPA
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 95% by SDS-PAGE.
Biological Activity	Measured by its ability to induce activation of βcatenin response in a Topflash Luciferase assay using HEK293T human embryonic kidney cells. The ED ₅₀ for this effect is typically 20-120 ng/mL in the presence of 5 ng/mL recombinant mouse Wnt3a.
Endotoxin	< 1.0 EU per 1µg of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only.