Recombinant Human R-spondin-1/RSPO1 Protein

RPCB0176

Description

This high-purity Recombinant Human R-spondin-1/RSPO1 Protein is supplied as a kit for advanced applications. The kit includes Bradford Reagent to quantify total protein concentration for accurate sample normalization (Optional).

Protein Information

SKU:	RPCB0176
Contents:	10 µg, 20 µg, 50 µg, 100 µg Bradford Reagent: 1 vial (2ml)
Synonyms:	RSPO1, CRISTIN3, RSPO
Species:	Human
Gene ID:	284654
Expression Host:	-
Tags:	C-His
Calculated MW:	26.44 kDa
Observed MW:	39 kDa
Purification:	≥ 95 % as determined by SDS-PAGE, ≥ 90 % as determined by HPLC.
Endotoxin:	< 0.1 EU/µg of the protein by LAL method.
Formulation:	Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4.Contact us for customized product form or formulation.
Bio- Activity:	1. Measured by its ability to enhance Cyclin D1 expression in HCT116 human colon adenocarcinoma cells. 0.1-10ng/mL of Recombinant Human RSPO1 can effectively enhance Cyclin D1 expression.

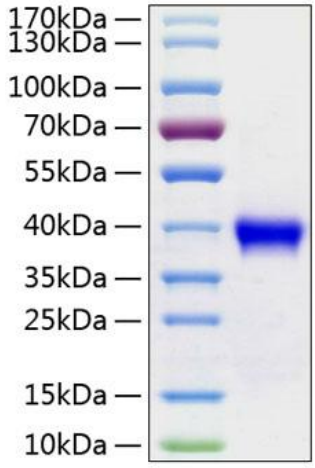
2. The intestinal crypts of mice were cultured in organoid culture medium containing factor combinations (100 ng/mL Noggin, RPCB0864 + 500 ng/mL R-spindin-1, RPCB0176) derived from ABclonal for144 hours, intestinal organoids were formed. (Customer Feedback Data)
3. Recombinant Human R-Spondin 1 protein stimulated Wnt signal pathway with Wnt-3a protein in HEK293T cells. After 6 hours, the stimulation when adding 300 ng/mL of R-Spondin-1 reached highest effect. Compared with only Wnt-3a stimulation, the Wnt signaling pathway was enhanced 3.1-fold after adding 300 ng/mL R-Spondin 1.

Preparation & Storage

Shipping:	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Storage:	Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week. Store Bradford Reagent at Room Temperature for 1 Year.
Reconstitution:	Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.
Protein Quantification (Optional):	To quantify total protein levels, use the Bradford Reagent included in this kit. Visit https://www.assaygenie.com/bradford-protein-assay-protocol/ to view the full protocol.

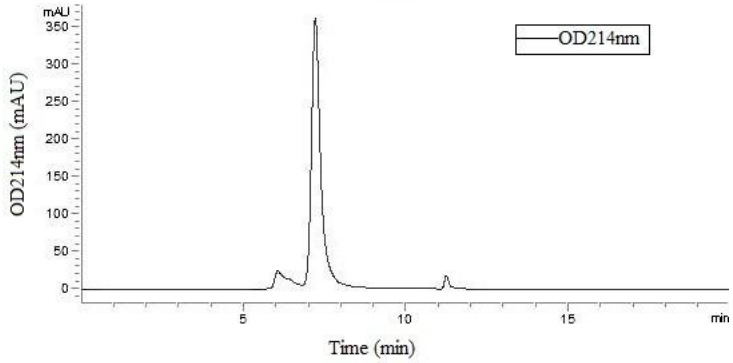
Validation Data

Image

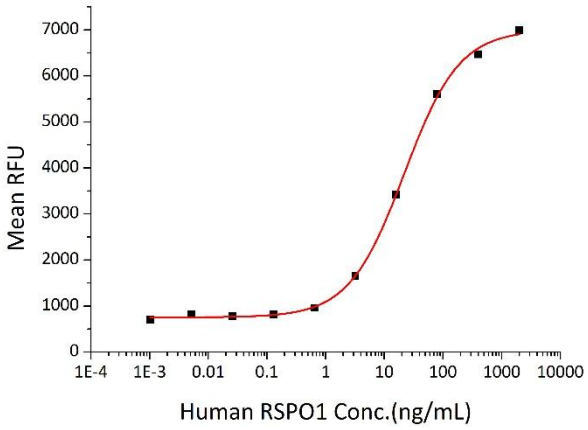


Description

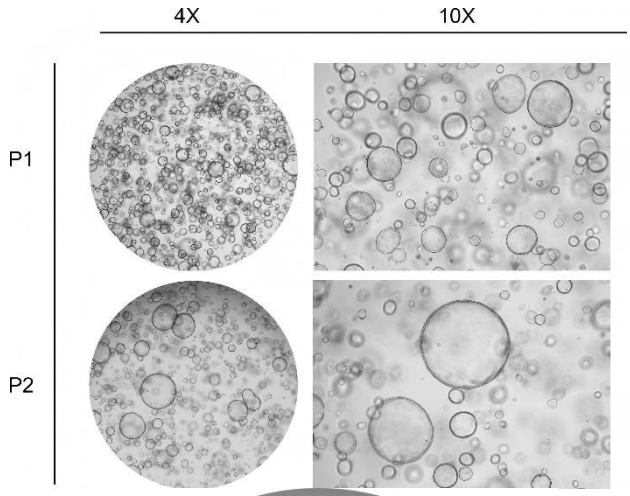
Recombinant Human R-spondin-1/RSPO1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



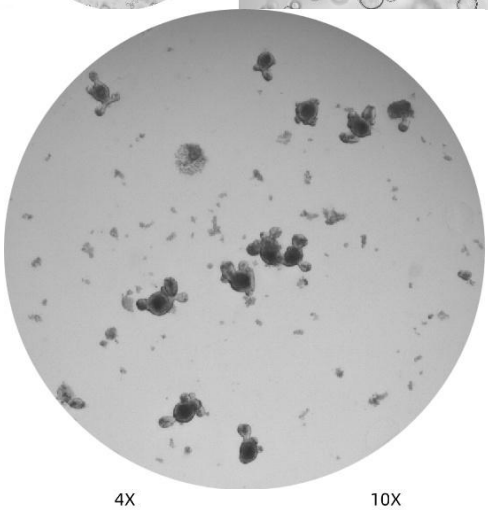
The purity of Recombinant Human R-spondin-1/RSPO1 Protein is greater than 90% as determined by SEC-HPLC.



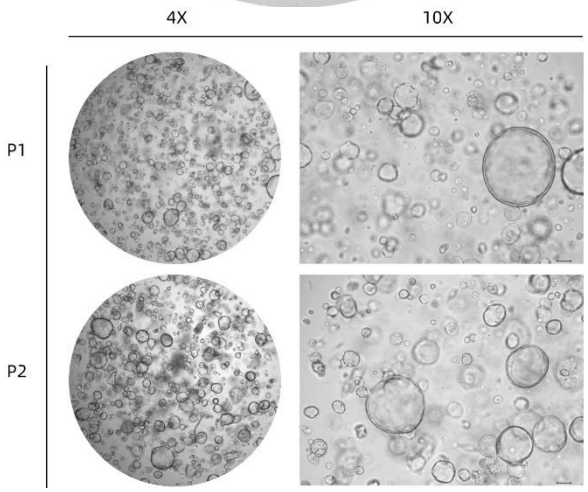
Recombinant Human R-spondin-1/RSPO1 Protein induce Topflash reporter activity in HEK293T human embryonic kidney cells. The ED50 for this effect is 6.61~26.44 ng/mL in the presence of 5 ng/mL Wnt Surrogate Protein, corresponding to a specific activity of 3.78×104~1.51×105 units/mg.



Human stomach organoids were cultured with EGF, FGF10(RPCB0828), NOG(RPCB0864), RSPO1(RPCB0176), WNT-3a(Cat. RP01618SLQ).



Mouse small intestinal organoids were cultured with EGF, NOG(RPCB0864), RSPO1(RPCB0176).



Human liver organoids were cultured with EGF, HGF(RPCB1637), FGF2(RPCB0853), FGF10(RPCB0828), NOG(RPCB0864), RSPO1(RPCB0176), WNT-3a(Cat. RP01618SLQ).