

Recombinant Human R-spondin-3/ RSPO3 Protein

Catalog No.: RP01952

Sequence Information

Species **Gene ID**
Human 84870

Swiss Prot **Tags**
Q9BXY4 C-His

Synonyms

RSPO3, PWTSR, THSD2, R-spondin-3, Protein with TSP type-1 repeat, hPWTSR, Roof plate-specific spondin-3, hRspo3, Thrombospondin type-1 domain-containing protein 2

Product Information

Source **Purification**
HEK293 cells ≥ 95 % as determined by SDS-PAGE.

Calculated MW **Observed MW**
29.17 kDa 40-60 kDa

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.

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 stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

R-spondin 3 (RSPO3) is a member of the R-Spondin (RSPO) family in vertebrates that activate Wnt/beta-catenin signaling, plays a key role in these processes. The RSPO family of secreted Wnt modulators is involved in development and disease and holds therapeutic promise as stem cell growth factors. The four members have high structural homology. RSPO2 and RSPO3 are more potent than RSPO1, whereas RSPO4 is relatively inactive. All RSPO members require Wnt ligands and LRP6 for activity and amplify signaling of Wnt3A, Wnt1, and Wnt7A, suggesting that RSPO proteins are general regulators of canonical Wnt signaling. RSPO3/PCP signaling during gastrulation requires Wnt5a and is transduced via Fz7, Dvl, and JNK. RSPO3 functions by inducing Sdc4-dependent, clathrin-mediated endocytosis. RSPO3 is a novel, evolutionarily conserved angiogenic factor in embryogenesis. RSPO3 has a key role in the interaction between chorion and allantois in labyrinthine development.

Basic Information

Description

Recombinant Human R-spondin-3/ RSPO3 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gln22-His272) of Human R-spondin-3/ RSPO3 (Accession #NP_116173.2) fused with a His tag at the C-terminus.

Activity

Measured by its ability to induce Topflash reporter activity in HEK293T human embryonic kidney cells. The ED50 for this effect is 5.53-22.1 ng/mL in the presence of 5 ng/mL Wnt Surrogate Protein, corresponding to a specific activity of $4.52 \times 10^4 \sim 1.81 \times 10^5$ units/mg.

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

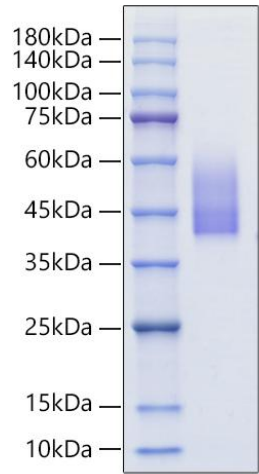
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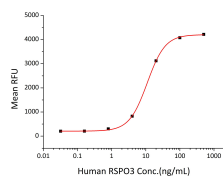
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Validation Data



Recombinant Human R-spondin-3/RSPO3 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



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