

Recombinant Human R-spondin-3/ RSPO3 Protein

Catalog No.: RP01952

Basic Information

Catalog No.

RP01952

Category

Cell Line

Parental Cell line

29.17 kDa

Genotype

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.

Gene Information

Gene Symbol

RSPO3[PB-TRANS

Species

HEK293 cells

Gene ID

84870

Swiss Prot

Q9BXY4

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

Contact

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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.

Product Information

Description

Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4.

Mammalian cells such as human, rat and mouse cells are normally diploid with two alleles.

Homozygote: both alleles were knocked out, mRNA has no signal, no expression of proteins.

Heterozygote: only one allele was knocked out, the mRNA transcript levels was decreased compared to wild type, and the protein expression levels was also lower than that of the wild type.

Packaging

Gln22-His272

Shipping Conditions

Centrifuge the vial before opening.

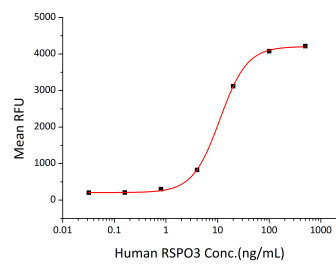
Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Storage

Store at -20°C

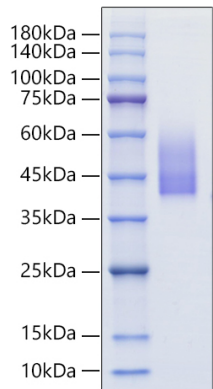
Protocol**Amount**

Sequencing data



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.

Sequencing data



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