

RSPO3 active protein

RSPO3 Protein, Human, Recombinant (aa 1-146, His Tag)

CATALOG #
AAA257966

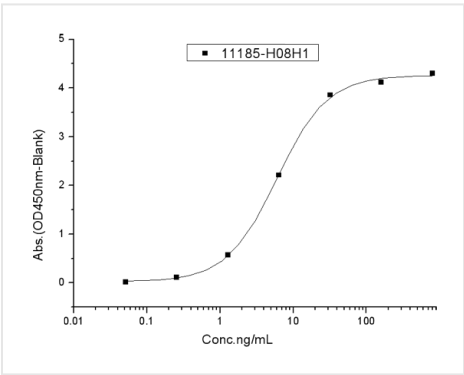
HOST
HEK293 Cells

PRODUCT SYNONYMS

RSPO3; RSPO3 Protein; Human; Recombinant (aa 1-146; His Tag); Human RSPO3/R-spondin 3 Protein (aa 1-146; CRISTIN1 Protein; PWTSR Protein; THSD2 Protein; R-spondin 3; RSPO3 active protein

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>96% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Sequence	Met1-Val14 6
Species	Human
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Gln 22
Tag	C-His
Protein Construction	A DNA sequence encoding the amino acids (Met 1-Val 146) of human RSPO3 (Q9BXY4-1) was fused with a polyhistidine tag at the C-terminus.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Activity	Measured by its binding ability in a functional ELISA. Immobilized Human RSPO3 His at 2ug/ml (100uL/well) can bind Human RNF43 hFc. The EC50 of Human RNF43 hFc is 3.0-12.0ng/mL.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.



SDS-PAGE

Application Data
Measured by its binding ability in a functional ELISA. Immobilized Human RSPO3 His at 2 ug/ml (100 ul/well) can bind Human RNF43 hFc, the EC50 of Human RNF43 hFc is 3.0-12.0 ng/mL.

ADDITIONAL INFORMATION

Related Product Information for RSPO3 active protein	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.
References	Aoki M, et al. (2007) R-spondin3 is required for mouse placental development. Dev Biol. 301(1): 218-26.Kazanskaya O, et al. (2008) The Wnt signaling regulator R-spondin 3 promotes angioblast and vascular development. Development. 135(22): 3655-64.Kim KA, et al. (2008) R-Spondin family members regulate the Wnt pathway by a common mechanism. Mol Biol Cell. 19(6): 2588-96.Ohkawara B, et al. (2011) Rspo3 Binds Syndecan 4 and Induces Wnt/PCP Signaling via Clathrin-Mediated Endocytosis to Promote Morphogenesis. Dev Cell. 20(3): 303-14.

NCBI AND UNIPROT INFORMATION

NCBI GI #	18490982
NCBI GeneID	84870
NCBI Accession #	NP_116173.2
NCBI GenBank Nucleotide #	NM_032784.4
UniProt Accession #	Q9BXY4; Q5VTV4; Q96K87; B2RC27
Molecular Weight	33,233 Da
NCBI Official Full Name	R-spondin-3
NCBI Official Synonym Full Names	R-spondin 3
NCBI Official Symbol	RSPO3
NCBI Official Synonym Symbols	PWTSR; THSD2; CRISTIN1
NCBI Protein Information	R-spondin-3; R-spondin 3 homolog; protein with TSP type-1 repeat; roof plate-specific spondin-3; thrombospondin type-1 domain-containing protein 2; thrombospondin, type I, domain containing 2
UniProt Protein Name	R-spondin-3

UniProt Gene Name	RSPO3
UniProt Synonym Gene Names	PWTSR; THSD2; hPWTSR; hRspo3
UniProt Entry Name	RSPO3_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/hek293-active-protein/rspo3/257966>