R-Spondin-1, human recombinant

CATALOG #:	7189-10	10 µg
	7189-50	50 µg
ALTERNATE NAMES:	Roof plate-specific Spondin, Rspo1	
SOURCE:	CHO cells	
PURITY:	≥ 95% by SDS-PAGE gel and HPLC analyses	
MOL. WEIGHT:	40.0 kDa	
ENDOTOXIN LEVEL:	< 0.1 ng/µg of protein (<1EU/µg).	
FORM:	Lyophilized	
FORMULATION:	Sterile filtered through a 0.2 micron filter. Lyophilized from 10mM Sodium Phosphate, pH 7.5 and 150 mM NaCl.	
STORAGE CONDITIONS:	Store at -20°C. After reconstitution, aliquot and store at -20°C to -80°C. Avoid repeated freezing and thawing cycles.	

RECONSTITUTION:
Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

DESCRIPTION:
R-Spondin-1 (Rspo-1) belongs to the (Rspo) family of Wnt modulators. Currently, the family consists of four structurally related secreted ligands (Rspo 1-4), all containing furin-like and thrombospondin structural domains. Rspo-1 is expressed in certain areas of the developing central nervous system, as well as in adrenal glands, ovary, testis, thyroid, and trachea. Rspo can interact with the Frizzled/LRP6 receptor complex in a manner that stimulates the Wnt/beta-catenin signaling pathway. Recombinant human R-Spondin-1 is a 26.7 kDa protein consisting of 243 amino acid residues. Due to glycosylation, R-Spondin-1 migrates at an apparent molecular weight of approximately 40.0 kDa by SDS PAGE analysis under reducing conditions.

AMINO ACID SEQUENCE:
SRGIKGKRQR RISAEGSQAC AKGCELCSEV NGCLKCSPKL FILLERNDIR QVGVCLPSCP PGYFDARNPD MNKCIKCKIE HCEACFSHNF CTKCKEGLYL HKGRCYPACP EGSSAANGTM ECSSPAQCEM SEWSPWGPCS KKQQLCGFRR GSEERTRRVL HAPVGDHAAC SDTKETRRCT VRRVPCPEGQ KRRKGGQGRR ENANRNLARK ESKEAGAGSR RRKGQQQQQQ QGTVGPLTSA GPA

BIOLOGICAL ACTIVITY:
R-spondin-1 enhances BMP-2 mediated differentiation of MC3T3-E1 cells. The expected ED_{50} is 1.0-3.0 ug/ml.

RELATED PRODUCTS:

- R-Spondin-2, human recombinant **(Cat. No. 7190-10, -50)**
- R-Spondin-3, human recombinant **(Cat. No. 7191-10, -50)**
- Thrombospondin, human **(Cat. No. 4806-25)**
- Thrombospondin, human recombinant **(Cat. No. 4805-10, -50, -1000)**

FOR RESEARCH USE ONLY! Not to be used in humans.