R-Spondin-3, human recombinant

CATALOG #: 7191-10 10 µg
7191-50 50 µg

ALTERNATE NAMES: PWTSR, THSD2, Roof plate-specific spondin-3, RSPO3

SOURCE: CHO cells

PURITY: ≥ 95% by SDS-PAGE gel and HPLC analyses

MOL. WEIGHT: 37.0 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:
The R-Spondin (Rspo) proteins belong 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. The Rspo proteins can interact with the Frizzled/LRP6 receptor complex in a manner that causes the stabilization and resulting accumulation of the intracellular signaling protein, β-catenin. This activity effectively activates and increases the subsequent nuclear signaling of β-catenin. R-Spondin can also bind to the previously discovered G-protein coupled receptors, LGR-4 and LGR-5. Rspo/β-catenin signaling can act as an inducer of the transformed phenotype, and can also regulate the proliferation and differentiation of certain stem cell populations. Recombinant human R-Spondin-3 is a 26.9 kDa protein consisting of 240 amino acid residues. Due to glycosylation, R-Spondin-3 migrates at an apparent molecular weight of approximately 37.0 kDa by SDS PAGE analysis under reducing conditions.

AMINO ACID SEQUENCE:
MHPNVSQGCQ GGCATCSDYN GCLSCKPRLF FALERIGMKQ IGVCLSSCPS GYYGTRYPDI NKCTKCKADC DTCFNKNFCT KCKSGFYLHL GKCLDNCPEG LEANNHTMEC VSIVHCEVSE WNPWSPCTKK GKTCGFKRGT ETRVREIIQH PSAKGNLCPP TNETRKCTVQ RKKCQKGERG KKGRERKRKK PNKGESKEAI PDSKSLESSK EIPEQRENKQ QQKKRKVQDK QKSVSVSTVH

BIOLOGICAL ACTIVITY:
R-Spondin-3 enhances BMP-2 mediated differentiation of MC3T3-E1 cells.

RELATED PRODUCTS:

- R-Spondin-1, human recombinant **(Cat. No. 7189-10, -50)**
- R-Spondin-2, human recombinant **(Cat. No. 7190-10, -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.