



Recombinant Mouse R-Spondin 1

20190502DS

**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

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|------------------|----------------------------|
| Cat.-no.: | M10-004S |
| Size: | 5 µg |
| Lot. No.: | According to product label |

Scientific Background

| | |
|------------------------|--------------------------------------|
| Gene-ID (NCBI): | 192199 |
| Synonyms: | Roof plate-specific Spondin-1, RSPO1 |

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 the furin-like and thrombospondin structural domains. Rspo-1 is expressed in certain areas of the developing central nervous system, as well as in the 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 Murine R-Spondin-1 is a 27.1 kDa protein consisting of 245 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.

Sequence

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SRGIKGRQR  RISAEGSQAC  AKGCELCSEV  NGCLKCSPKL  
FILLERNDIR  QVGVCLPSCP  PGYFDARNPD  MNKCIKCKIE  
HCEACFSHNF  CTKCQEGLYL  HKGRCYPACP  EGSTAANSTM  
ECGSPAQCEM  SEWSPWGPCS  KKRKLCGFRK  GSEERTRRVL  
HAPGGDHTTC  SDTKETRKCT  VRRTPCPEGQ  KRRKGGQGRR  
ENANRHPARK  NSKEPGSNSR  RHKGQQQFPQ  GTTGPLTSTV  
PTWAQ
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Database References

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|------------------------|-------------|
| Protein RefSeq: | NP_619624.2 |
| Uniprot ID: | Q9Z132 |
| mRNA RefSeq: | NM_138683.2 |

Product Specifications

| | |
|------------------------|------------------------------------|
| Expressed in | CHO cells |
| Purity | > 95% by SDS-PAGE & HPLC analyses |
| Endotoxin level | < 0.1 ng /µg of protein (<1EU/µg). |
| Formulation | lyophilized |
| Length (aa): | 245 |
| MW: | 40.0 kDa (reducing conditions) |

Stability: The lyophilized protein is stable at room temperature for 1 month and at 4°C for 6 months. Reconstituted working aliquots are stable for 1 week at 2°C to 8°C and for 12 months at -20°C to -80°C.

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.

**AVOID REPEATED FREEZE AND THAW CYCLES!**

Biological Activity: R-Spondin-1 enhances BMP-2-mediated differentiation of MC3T3-E1 cells.