



# Recombinant Mouse R-Spondin 1

20190502DS



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

<b>Cat.-no.:</b>	<b>M10-004</b>
Size:	20 µg
Lot. No.:	According to product label

## Scientific Background

<b>Gene-ID (NCBI):</b>	192199
<b>Synonyms:</b>	Roof plate-specific Spondin-1, RSP01

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

```
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
```

### Database References

<b>Protein RefSeq:</b>	NP_619624.2
<b>Uniprot ID:</b>	Q9Z132
<b>mRNA RefSeq:</b>	NM_138683.2

## Product Specifications

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