

# R-Spondin3 (G-14): sc-107984

## BACKGROUND

Roof plate-specific Spondins (R-Spondins) are secreted proteins that possess a Furin-like cysteine-rich domain and are involved in regulating  $\beta$ -catenin function. R-Spondin3, also known as RSPO3, PWTSR, THSD2 or CRISTIN1, is a 272 amino acid secreted protein that contains one TSP type-1 domain and 2 furin-like repeats. Expressed ubiquitously with particularly high levels present in placenta, thymus and lymph node, R-Spondin3 functions to activate the  $\beta$ -catenin signaling cascade, ultimately leading to TCF-dependent gene activation. Multiple isoforms of R-Spondin3 exist due to alternative splicing events. The gene encoding R-Spondin3 maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, Porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

## REFERENCES

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- Theodorou, V., et al. 2007. MMTV insertional mutagenesis identifies genes, gene families and pathways involved in mammary cancer. *Nat. Genet.* 39: 759-769.
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## CHROMOSOMAL LOCATION

Genetic locus: RSPO3 (human) mapping to 6q22.33.

## SOURCE

R-Spondin3 (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of R-Spondin3 of human origin.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PRODUCT

Each vial contains 200  $\mu\text{g}$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107984 P, (100  $\mu\text{g}$  peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

R-Spondin3 (G-14) is recommended for detection of R-Spondin3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

R-Spondin3 (G-14) is also recommended for detection of R-Spondin3 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for R-Spondin3 siRNA (h): sc-95265, R-Spondin3 shRNA Plasmid (h): sc-95265-SH and R-Spondin3 shRNA (h) Lentiviral Particles: sc-95265-V.

Molecular Weight of R-Spondin3: 31 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.