SANTA CRUZ BIOTECHNOLOGY, INC.

R-Spondin2 (C-12): sc-74883

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Roof plate-specific Spondins (R-Spondins) are secreted proteins that possess a Furin-like cysteine-rich domain and are involved in regulating β-catenin function. R-Spondin2, also known as RSPO2 or CRISTIN2, is a 243 amino acid secreted protein that contains one FU repeat and one TSP type-1 domain. Existing as multiple alternatively spliced isoforms, R-Spondin2 interacts with Wnt-1 and functions to activate the β-catenin signaling cascade, ultimately leading to TCF-dependent gene activation. Additionally, R-Spondin2 is thought to act as a ligand for LRP and frizzled receptors. The gene encoding R-Spondin2 maps to human chromosome 8, which encodes over 800 genes and is associated with a variety of diseases and malignancies. Schizophrenia, bipolar disorder, Trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas are thought to occur as a result of defects in specific genes that maps to chromosome 8.

REFERENCES

1. Kazanskaya, O., et al. 2004. R-Spondin2 is a secreted activator of Wnt/β-catenin signaling and is required for *Xenopus myogenesis*. Dev. Cell 7: 525-534.
2. Kim, K.A., et al. 2006. R-Spondin proteins: a novel link to β-catenin activation. Cell Cycle 5: 23-26.
3. Nam, J.S., et al. 2006. Mouse cristin/R-Spondin family proteins are novel ligands for the frizzled-8 and LRP6 receptors and activate β-catenin-dependent gene expression. J. Biol. Chem. 281: 13247-13257.
4. Kim, K.A., et al. 2008. R-Spondin family members regulate the Wnt pathway by a common mechanism. Mol. Biol. Cell 19: 2588-2596.
5. Li, S.J., et al. 2009. Loss-of-function point mutations and two-Furin domain derivatives provide insights about R-Spondin2 structure and function. Cell. Signal. 21: 916-925.
6. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 610575. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: RSPO2 (human) mapping to 8q23.1; Rspo2 (mouse) mapping to 15 B3.1.

SOURCE

R-Spondin2 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of R-Spondin2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-74883 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

R-Spondin2 (C-12) is recommended for detection of R-Spondin2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for R-Spondin2 siRNA (h): sc-76307, R-Spondin2 siRNA (m): sc-76308, R-Spondin2 shRNA Plasmid (h): sc-76307-SH, R-Spondin2 shRNA Plasmid (m): sc-76308-SH, R-Spondin2 shRNA (h) Lentiviral Particles: sc-76307-V and R-Spondin2 shRNA (m) Lentiviral Particles: sc-76308-V.

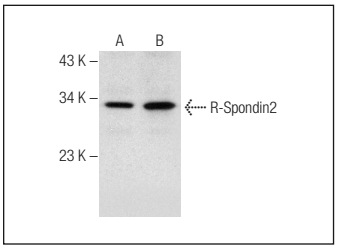
Molecular Weight of R-Spondin2: 28 kDa.

Positive Controls: SW480 cell lysate: sc-2219 or HCT-116 whole cell lysate: sc-364175.

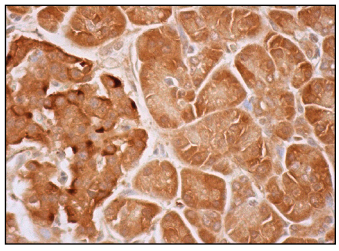
RECOMMENDED SECONDARY REAGENTS

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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



R-Spondin2 (C-12): sc-74883. Western blot analysis of R-Spondin2 expression in SW480 (**A**) and HCT-116 (**B**) whole cell lysates.



R-Spondin2 (C-12): sc-74883. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells and Islets of Langerhans.

STORAGE

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

RESEARCH USE

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