

R-Spondin2 (H-55): sc-292494

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 RSP02 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. Friedman, M.S., et al. 2009. Wnt11 promotes osteoblast maturation and mineralization through R-spondin 2. *J. Biol. Chem.* 284: 14117-14125.
7. Starr, T.K., et al. 2009. A transposon-based genetic screen in mice identifies genes altered in colorectal cancer. *Science* 323: 1747-1750.

CHROMOSOMAL LOCATION

Genetic locus: RSP02 (human) mapping to 8q23.1; Rspo2 (mouse) mapping to 15 B3.1.

SOURCE

R-Spondin2 (H-55) is a rabbit polyclonal antibody raised against amino acids 163-217 mapping near the C-terminus of R-Spondin2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

R-Spondin2 (H-55) 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 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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-Spondin2 (H-55) is also recommended for detection of R-Spondin2 in additional species, including bovine and canine.

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.

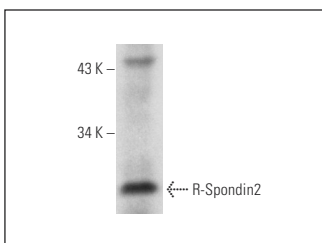
Molecular Weight of R-Spondin2: 28 kDa.

Positive Controls: mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



R-Spondin2 (H-55): sc-292494. Western blot analysis of R-Spondin2 expression in mouse brain tissue extract.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.