SANTA CRUZ BIOTECHNOLOGY, INC.

R-Spondin siRNA (h): sc-61429

BACKGROUND

The Thrombospondin proteins compose a family of glycoproteins that are involved in cell-to-cell and cell-to-matrix signaling. Roof plate-specific spondin (R-Spondin) posseses a furin-like cysteine-rich domains and a Thrombospondin repeat. This 265 amino acid member of the Thrombospondin family is expressed in enteroendocrine and epithelial cells in various tissues and localizes in the boundary between the roof plate and neuroepithelium. R-Spondin may contribute to the development of dorsal neural tube under the regulation of the Wnt/β-catenin signaling pathway which leads to T cell factor-dependent gene activation. R-Spondin exhibits a positive modulatory activity on Wnt ligands, possibly through a direct interaction. R-Spondin induces a rapid onset of crypt cell proliferation involving β-catenin stabilization, and it acts as a mitogen in human gastrointestinal epithelium.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: RSPO1 (human) mapping to 1p34.3.

PROTOCOLS

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

PRODUCT

R-Spondin siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see R-Spondin shRNA Plasmid (h): sc-61429-SH and R-Spondin shRNA (h) Lentiviral Particles: sc-61429-V as alternate gene silencing products.

For independent verification of R-Spondin (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61429A, sc-61429B and sc-61429C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

R-Spondin siRNA (h) is recommended for the inhibition of R-Spondin expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor R-Spondin gene expression knockdown using RT-PCR Primer: R-Spondin (h)-PR: sc-61429-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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