SANTA CRUZ BIOTECHNOLOGY, INC.

β-catenin siRNA (m): sc-29210

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The catenins, α, β and γ, are proteins which bind to the highly conserved, intracellular cytoplasmic tail of E-cadherin. Together, the catenin/cadherin complexes play an important role mediating cellular adhesion. α-catenin was initially described as an E-cadherin associated protein, and since has been shown to associate with other members of the cadherin family, such as N-cadherin and P-cadherin. β-catenin associates with the cytoplasmic portion of E-cadherin, which is necessary for the function of E-cadherin as an adhesion molecule. β-catenin has also been found in complexes with the tumor suppressor protein APC. γ-catenin, also known as plakoglobin, binds with α-catenin and N-cadherin. It has been shown that the transmembrane phosphatase PTPμ associates with catenin/cadherin complexes and may regulate complex signaling.

REFERENCES

1. Knudsen, K.A., et al. 1995. Interaction of α-actinin with the cadherin/catenin cell-cell adhesion complex via α-catenin. J. Cell Biol. 130: 67-77.
2. Breen, E., et al. 1995. Role of the E-cadherin/α-catenin complex in modulating cell-cell and cell-matrix adhesive properties of invasive colon carcinoma cells. Ann. Surg. Oncol. 2: 378-385.

CHROMOSOMAL LOCATION

Genetic locus: Ctnnb1 (mouse) mapping to 9 F4.

PRODUCT

β-catenin siRNA (m) is a pool of 4 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 β-catenin shRNA Plasmid (m): sc-29210-SH and β-catenin shRNA (m) Lentiviral Particles: sc-29210-V as alternate gene silencing products.

For independent verification of β-catenin (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-29210A, sc-29210B, sc-29210C and sc-29210D.

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

β-catenin siRNA (m) is recommended for the inhibition of β-catenin expression in mouse 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.

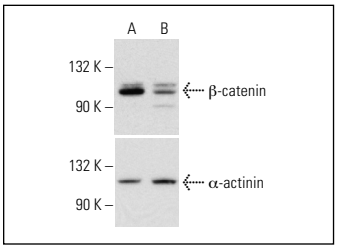
GENE EXPRESSION MONITORING

β-catenin (E-5): sc-7963 is recommended as a control antibody for monitoring of β-catenin gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor β-catenin gene expression knockdown using RT-PCR Primer: β-catenin (m)-PR: sc-29210-PR (20 μl, 446 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

DATA



β-catenin siRNA (m): sc-29210. Western blot analysis of β-catenin expression in non-transfected control (**A**) and β-catenin siRNA transfected (**B**) C_2C_{12} cells. Blot probed with β-catenin (C-18): sc-1496. α-actinin (H-2): sc-17829 used as specificity and loading control.

SELECT PRODUCT CITATIONS

1. Li, H.L., et al. 2007. Phosphorylation of tau antagonizes apoptosis by stabilizing β-catenin, a mechanism involved in Alzheimer's neurodegeneration. Proc. Natl. Acad. Sci. USA 104: 3591-3596.
2. Yao, D.D., et al. 2015. Geniposide promotes β-cell regeneration and survival through regulating β-catenin/TCF7L2 pathway. Cell Death Dis. 6: e1746.
3. Choi, S.Y., et al. 2016. Charged amino acid-rich Leucine Zipper-1 (Crlz-1) as a target of Wnt signaling pathway controls Pre-B cell proliferation by affecting Runx/CBFβ-targeted VpreB and λ5 genes. J. Biol. Chem. 291: 15008-15019.

RESEARCH USE

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