SANTA CRUZ BIOTECHNOLOGY, INC.

NOTCH2NL siRNA (h): sc-88057

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The Power to Question

BACKGROUND

The Notch signaling pathway controls cellular interactions important for the specification of a variety of fates in both invertebrates and vertebrates. NOTCH2NL (Notch homolog 2 N-terminal-like), also known as N2N, is a 236 amino acid protein that has a nonspecific function in Notch signaling. The Notch genes are expressed in a variety of tissues in both the embryonic and adult organism, suggesting that the genes are involved in multiple signaling pathways. The Notch proteins have been found to be overexpressed or rearranged in human tumors. In addition, mutations in Notch genes may cause hyperplasia of the nervous system.

REFERENCES

1. Swiatek, P.J., et al. 1994. Notch1 is essential for postimplantation development in mice. Genes Dev. 8: 707-719.
2. Artavanis-Tsakonas, S., et al. 1999. Notch signaling: cell fate control and signal integration in development. Science 284: 770-776.
3. Cuevas, I.C., et al. 2005. Meningioma transcript profiles reveal deregulated Notch signaling pathway. Cancer Res. 65: 5070-5075.
4. Zhan, F., et al. 2006. The molecular classification of multiple myeloma. Blood 108: 2020-2028.
5. Birkaya, B., et al. 2007. Novel *in vivo* targets of ΔNp63 in keratinocytes identified by a modified chromatin immunoprecipitation approach. BMC Mol. Biol. 8: 43.
6. Lomberk, G. and Urrutia, R. 2008. Primers on molecular pathways—Notch. Pancreatology 8: 103-104.

CHROMOSOMAL LOCATION

Genetic locus: NOTCH2NL (human) mapping to 1q21.1.

PRODUCT

NOTCH2NL 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 NOTCH2NL shRNA Plasmid (h): sc-88057-SH and NOTCH2NL shRNA (h) Lentiviral Particles: sc-88057-V as alternate gene silencing products.

For independent verification of NOTCH2NL (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-88057A, sc-88057B and sc-88057C.

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

NOTCH2NL siRNA (h) is recommended for the inhibition of NOTCH2NL 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.

GENE EXPRESSION MONITORING

NOTCH2NL (39-Y): sc-100307 is recommended as a control antibody for monitoring of NOTCH2NL 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NOTCH2NL gene expression knockdown using RT-PCR Primer: NOTCH2NL (h)-PR: sc-88057-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Sehrawat, A., et al. 2014. Notch2 activation is protective against anti-cancer effects of zerumbone in human breast cancer cells. Breast Cancer Res. Treat. 146: 543-555.

RESEARCH USE

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

PROTOCOLS

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