SANTA CRUZ BIOTECHNOLOGY, INC.

Deltex-2 siRNA (m): sc-142989

BACKGROUND

The Deltex family of proteins (Deltex-1, -2, -3 and -4) are mammalian homologs of *Drosophila* Deltex. This family contains 2 WWE domains and a C-terminal RING finger domain, which are regions that are frequently found in E3 ubiquitin ligases. Deltex-2, also known as hDTX2 or RING finger protein 58, is a 622 amino acid protein that plays a regulatory role in the Notch signaling pathway. Like Deltex-1, Deltex-2 interacts with an intracellular domain of Notch. Localized to the cytoplasm with partial localization to the nucleus, Deltex-2 has been shown to function as a ubiquitin ligase protein *in vitro,* possibly explaining the mechanism by which it positively and negatively regulates Notch. Deltex-2 is highly expressed in thymus and pancreas where it exists as either a homomultimer or a heteromultimer with other Deltex family members. Two isoforms of Deltex-2 are expressed due to alternative splicing events.

REFERENCES

1. Cornell, M., et al. 1999. The *Drosophila melanogaster* suppressor of Deltex gene, a regulator of the Notch receptor signaling pathway, is an E3 class ubiquitin ligase. Genetics 152: 567-576.
2. Kishi, N., et al. 2001. Murine homologs of Deltex define a novel gene family involved in vertebrate Notch signaling and neurogenesis. Int. J. Dev. Neurosci. 19: 21-35.
3. Yamamoto, N., et al. 2001. Role of Deltex-1 as a transcriptional regulator downstream of the Notch receptor. J. Biol. Chem. 276: 45031-45040.
4. Endo, Y., et al. 2003. Deltex/Dtx mediates Notch signaling in regulation of BMP4 expression in cranial neural crest formation during avian development. Dev. Growth Differ. 45: 241-248.

CHROMOSOMAL LOCATION

Genetic locus: Dtx2 (mouse) mapping to 5 G2.

PRODUCT

Deltex-2 siRNA (m) 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 Deltex-2 shRNA Plasmid (m): sc-142989-SH and Deltex-2 shRNA (m) Lentiviral Particles: sc-142989-V as alternate gene silencing products.

For independent verification of Deltex-2 (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-142989A, sc-142989B and sc-142989C.

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

Deltex-2 siRNA (m) is recommended for the inhibition of Deltex-2 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Deltex-2 gene expression knockdown using RT-PCR Primer: Deltex-2 (m)-PR: sc-142989-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.

PROTOCOLS

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