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### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# Deltex-1 siRNA (h): sc-45649

## BACKGROUND

Deltex-1 (DTX) influences B cell lineage and splenic marginal-zone B cell commitment. The inhibitory signals mediated through Deltex-1 along with inductive Notch-1 signals act as modulators of T-B lineage commitment. Deltex family members influence Notch signaling and may regulate transcription through interactions with specific transcription factors. Deltex proteins have a basic N-terminus, a central proline-rich region and a C-terminal RING finger domain, a motif often found in ubiquitin-protein isopeptide ligases (E3). Kurtz (Krz) is an Arrestin family member that binds Deltex in a trimeric complex together with Notch and mediates the degradation of the Notch receptor through a ubiquitination-dependent pathway.

## REFERENCES

1. Matsuno, K., et al. 1998. Human Deltex is a conserved regulator of Notch signalling. *Nat. Genet.* 19: 74-78.
2. Yamamoto, N., et al. 2001. Role of Deltex-1 as a transcriptional regulator downstream of the Notch receptor. *J. Biol. Chem.* 276: 45031-45040.
3. Izon, D.J., et al. 2002. Deltex-1 redirects lymphoid progenitors to the B cell lineage by antagonizing Notch 1. *Immunity* 16: 231-243.
4. Takeyama, K., et al. 2003. The BAL-binding protein BBAP and related Deltex family members exhibit ubiquitin-protein isopeptide ligase activity. *J. Biol. Chem.* 278: 21930-21937.
5. Cui, X.Y., et al. 2004. NB-3/Notch 1 pathway via Deltex-1 promotes neural progenitor cell differentiation into oligodendrocytes. *J. Biol. Chem.* 279: 25858-25865.
6. Liu, W.H., et al. 2005. Deltex regulates T cell activation by targeted degradation of active MEK1. *Mol. Cell. Biol.* 25: 1367-1378.
7. Storck, S., et al. 2005. Normal immune system development in mice lacking the Deltex-1 RING finger domain. *Mol. Cell. Biol.* 25: 1437-1445.
8. Mukherjee, A., et al. 2005. Regulation of Notch signalling by non-visual  $\beta$ -Arrestin. *Nat. Cell Biol.* 7: 1091-1101.

## CHROMOSOMAL LOCATION

Genetic locus: DTX1 (human) mapping to 12q24.13.

## PRODUCT

Deltex-1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Deltex-1 shRNA Plasmid (h): sc-45649-SH and Deltex-1 shRNA (h) Lentiviral Particles: sc-45649-V as alternate gene silencing products.

For independent verification of Deltex-1 (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-45649A, sc-45649B and sc-45649C.

## RESEARCH USE

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

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Deltex-1 siRNA (h) is recommended for the inhibition of Deltex-1 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  $\mu$ M in 66  $\mu$ l. 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-1 gene expression knockdown using RT-PCR Primer: Deltex-1 (h)-PR: sc-45649-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.