SANTA CRUZ BIOTECHNOLOGY, INC.

DTX3L siRNA (h): sc-78364

BACKGROUND

The Deltex family is responsible for influencing 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-type zinc finger domain, a motif often found in ubiquitin-protein isopeptide ligases (E3). The RING-type zinc finger domain binds two Zn^{2+} atoms and forms a cross-brace motif that is essential for many proteins involved the ubiquitination pathway. DTX3L (Deltex-3-like), also known as BBAP, is a 740 amino acid protein that is similar to Deltex-3 and acts as a ubiquitin ligase *in vitro*. DTX3L can heterodimerize with Deltex-1, a transcriptional regulator, thereby enhancing the activity of the E3 ubiquitin ligase complex and increasing the influence of E3 on the Notch signaling 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. Deltex1 redirects lymphoid progenitors to the B cell lineage by antagonizing Notch1. 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/Notch1 pathway via Deltex1 promotes neural progenitor cell differentiation into oligodendrocytes. J. Biol. Chem. 279: 25858-25865.
6. Juszczynski, P., et al. 2006. BAL1 and BBAP are regulated by a γ interferon-responsive bidirectional promoter and are overexpressed in diffuse large B-cell lymphomas with a prominent inflammatory infiltrate. Mol. Cell. Biol. 26: 5348-5359.

CHROMOSOMAL LOCATION

Genetic locus: DTX3L (human) mapping to 3q21.1.

PRODUCT

DTX3L 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 DTX3L shRNA Plasmid (h): sc-78364-SH and DTX3L shRNA (h) Lentiviral Particles: sc-78364-V as alternate gene silencing products.

For independent verification of DTX3L (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-78364A, sc-78364B and sc-78364C.

PROTOCOLS

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

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

DTX3L siRNA (h) is recommended for the inhibition of DTX3L 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

DTX3L (D-10): sc-514776 is recommended as a control antibody for monitoring of DTX3L 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 DTX3L gene expression knockdown using RT-PCR Primer: DTX3L (h)-PR: sc-78364-PR (20 µl, 487 bp). 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.