



Deltex-3 siRNA (m): sc-142990

BACKGROUND

The Deltex family of proteins (Deltex-1, 2, 3 and 4) are mammalian homologs of *Drosophila* Deltex. This family contains two WWE domains and a C-terminal RING-finger domain, which are regions that are frequently found in E3 ubiquitin ligases. Deltex-3, also known as RNF154 (RING finger protein 154), is a 347 amino acid cytoplasmic protein that acts as both a negative and positive regulator of Notch, depending on the developmental and cell context. Though primarily acting as a homomultimer, Deltex-3 may form a heteromultimer with other Deltex proteins. Like other Deltex family members, Deltex-3 functions as a ubiquitin E3 ligase that shows highest activity in conjunction with the E2 enzyme UBE2D. There are two isoforms of Deltex-3 that are produced as a result of alternative splicing events.

REFERENCES

1. 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.
2. Blacklow, S.C. 2005. A new niche for Notch on Deltex? *Structure* 13: 1579-1580.
3. Chastagner, P., et al. 2006. Itch/AIP4 mediates Deltex degradation through the formation of K29-linked polyubiquitin chains. *EMBO Rep.* 7: 1147-1153.
4. Lehar, S.M., et al. 2006. T cells develop normally in the absence of both Deltex-1 and Deltex-2. *Mol. Cell. Biol.* 26: 7358-7371.
5. Jennings, M.D., et al. 2007. Specificity and autoregulation of Notch binding by tandem WW domains in suppressor of Deltex. *J. Biol. Chem.* 282: 29032-29042.
6. Wilkin, M., et al. 2008. *Drosophila* HOPS and AP-3 complex genes are required for a Deltex-regulated activation of notch in the endosomal trafficking pathway. *Dev. Cell* 15: 762-772.
7. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 613142. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: Dtx3 (mouse) mapping to 10 D3.

PRODUCT

Deltex-3 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Deltex-3 shRNA Plasmid (m): sc-142990-SH and Deltex-3 shRNA (m) Lentiviral Particles: sc-142990-V as alternate gene silencing products.

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

APPLICATIONS

Deltex-3 siRNA (m) is recommended for the inhibition of Deltex-3 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 μ M in 66 μ 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.

GENE EXPRESSION MONITORING

Deltex-3 (C-10): sc-376439 is recommended as a control antibody for monitoring of Deltex-3 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 Deltex-3 gene expression knockdown using RT-PCR Primer: Deltex-3 (m)-PR: sc-142990-PR (20 μ l). 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.