SANTA CRUZ BIOTECHNOLOGY, INC.

TLE6 siRNA (h): sc-97764

BACKGROUND

The Notch signaling pathway controls various cellular interactions that are important for the specification of a variety of fates in both vertebrates and invertebrates. Key players in the Notch pathway are the TLE genes (for transducin-like enhancer of split, also designated ESG for enhancer of split groucho), which are human homologs of the *Drosophila* groucho gene. TLE6 (transducin-like enhancer of split 6), also known as GRG6, is a 449 amino acid cytoplasmic protein belonging to the WD repeat groucho/TLE family. As a member of the subcortical maternal complex (SCMC), TLE6 is essential for zygotes to progress beyond the first embryonic cell divisions. TLE6 contains seven WD repeats, a motif known to mediate protein-protein interactions. The WD40 repeat family of proteins is suggested to be involved in signal transduction, RNA processing, gene regulation, vesicular trafficking, cytoskeletal assembly and may play a role in the control of cytotypic differentiation.

REFERENCES

1. Wang, J.C., et al. 2000. Transducin-like enhancer of split proteins, the human homologs of *Drosophila* groucho, interact with hepatic nuclear factor 3β. J. Biol. Chem. 275: 18418-18423.
2. Tetsuka, T., et al. 2000. Inhibition of nuclear factor-κB-mediated transcription by association with the amino-terminal enhancer of split, a groucho-related protein lacking WD40 repeats. J. Biol. Chem. 275: 4383-4390.
3. Yochum, G.S. and Ayer, D.E. 2001. Pf1, a novel PHD zinc finger protein that links the TLE corepressor to the mSin3A-histone deacetylase complex. Mol. Cell. Biol. 21: 4110-4118.
4. Marçal, N., et al. 2005. Antagonistic effects of Grg6 and groucho/TLE on the transcription repression activity of brain factor 1/FoxG1 and cortical neuron differentiation. Mol. Cell. Biol. 25: 10916-10929.
5. Bajoghli, B. 2007. Evolution of the groucho/Tle gene family: gene organization and duplication events. Dev. Genes Evol. 217: 613-618.
6. Jennings, B.H. and Ish-Horowicz, D. 2008. The groucho/TLE/Grg family of transcriptional co-repressors. Genome Biol. 9: 205.

CHROMOSOMAL LOCATION

Genetic locus: TLE6 (human) mapping to 19p13.3.

PRODUCT

TLE6 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 TLE6 shRNA Plasmid (h): sc-97764-SH and TLE6 shRNA (h) Lentiviral Particles: sc-97764-V as alternate gene silencing products.

For independent verification of TLE6 (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-97764A, sc-97764B and sc-97764C.

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 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

TLE6 siRNA (h) is recommended for the inhibition of TLE6 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

TLE6 (D-4): sc-515065 is recommended as a control antibody for monitoring of TLE6 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-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (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 TLE6 gene expression knockdown using RT-PCR Primer: TLE6 (h)-PR: sc-97764-PR (20 µl). 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 for detailed protocols and support products.