

ELL2 siRNA (h): sc-77259

BACKGROUND

ELL2 (RNA polymerase II elongation factor ELL2) is a 640 amino acid nuclear protein that belongs to the ELL/occludin family. This family is defined by a highly conserved domain of approximately 100 amino residues found within all eukaryotic occludin proteins and the RNA polymerase II elongation factor ELL. These elongation factors activate elongation by suppressing transient pausing by polymerase at many sites along the DNA and govern its interaction with RNA polymerase II and the ternary elongation complex. ELL2 may also contain a novel type of RNA polymerase II interaction domain that is capable of negatively regulating polymerase activity in promoter-specific transcription initiation *in vitro*.

REFERENCES

1. Simone, F., et al. 2001. EAF1, a novel ELL-associated factor that is delocalized by expression of the MLL-ELL fusion protein. *Blood* 98: 201-209.
2. Trembley, J.H., et al. 2002. PITSLRE p110 protein kinases associate with transcription complexes and affect their activity. *J. Biol. Chem.* 277: 2589-2596.
3. Simone, F., et al. 2003. ELL-associated factor 2 (EAF2), a functional homolog of EAF1 with alternative ELL binding properties. *Blood* 101: 2355-2362.
4. Daibata, M., et al. 2004. Differential gene-expression profiling in the leukemia cell lines derived from indolent and aggressive phases of CD56⁺ T-cell large granular lymphocyte leukemia. *Int. J. Cancer* 108: 845-851.
5. Sakurai, K., et al. 2004. Inhibition of the canonical Wnt signaling pathway in cytoplasm: a novel property of the carboxyl terminal domains of two *Xenopus* ELL genes. *Zoolog. Sci.* 21: 407-416.
6. Maurus, D., et al. 2005. Noncanonical Wnt-4 signaling and EAF2 are required for eye development in *Xenopus laevis*. *EMBO J.* 24: 1181-1191.
7. Romero, D.G., et al. 2007. Adrenal transcription regulatory genes modulated by angiotensin II and their role in steroidogenesis. *Physiol. Genomics* 30: 26-34.
8. Shell, S.A., et al. 2007. Increased phosphorylation of the carboxyl-terminal domain of RNA polymerase II and loading of polyadenylation and cotranscriptional factors contribute to regulation of the ig heavy chain mRNA in plasma cells. *J. Immunol.* 179: 7663-7673.

CHROMOSOMAL LOCATION

Genetic locus: ELL2 (human) mapping to 5q15.

PRODUCT

ELL2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ELL2 shRNA Plasmid (h): sc-77259-SH and ELL2 shRNA (h) Lentiviral Particles: sc-77259-V as alternate gene silencing products.

For independent verification of ELL2 (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-77259A, sc-77259B and sc-77259C.

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

ELL2 siRNA (h) is recommended for the inhibition of ELL2 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 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

ELL2 (B-7): sc-515276 is recommended as a control antibody for monitoring of ELL2 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 ELL2 gene expression knockdown using RT-PCR Primer: ELL2 (h)-PR: sc-77259-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.

PROTOCOLS

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