



UTP23 siRNA (h): sc-77525

BACKGROUND

UTP23, also known as C8orf53, is a 249 amino acid nuclear protein that belongs to the UTP23/FCF1 family and the UTP23 subfamily. Existing as two alternatively spliced isoforms, UTP23 is involved in rRNA-processing and ribosome biogenesis. The gene that encodes UTP23 consists of approximately 82,961 bases and maps to human chromosome 8q24.11. Made up of nearly 146 million bases, chromosome 8 encodes approximately 800 genes and is associated with a variety of diseases and malignancies. Portions of chromosome 8 have been linked to schizophrenia and bipolar disorder, as well as Pfeiffer syndrome, congenital hypothyroidism and Waardenburg syndrome. Trisomy 8, also known as Warkany syndrome 2, most often results in early miscarriage but is occasionally seen in surviving patients who suffer to a varying degree from a number of symptoms including impaired mental and motor development.

REFERENCES

1. Dalla-Favera, R., et al. 1982. Human c-Myc onc gene is located on the region of chromosome 8 that is translocated in Burkitt lymphoma cells. *Proc. Natl. Acad. Sci. USA* 79: 7824-7827.
2. Kashino, G., et al. 2001. Preferential expression of an intact WRN gene in Werner syndrome cell lines in which a normal chromosome 8 has been introduced. *Biochem. Biophys. Res. Commun.* 289: 111-115.
3. Selicorni, A., et al. 2002. Cytogenetic mapping of a novel locus for type II Waardenburg syndrome. *Hum. Genet.* 110: 64-67.
4. McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. *Am. J. Hum. Genet.* 77: 582-595.
5. Mossafa, H., et al. 2006. Non-Hodgkin's lymphomas with Burkitt-like cells are associated with c-Myc amplification and poor prognosis. *Leuk. Lymphoma* 47: 1885-1893.
6. Agrelo, R., et al. 2006. Epigenetic inactivation of the premature aging Werner syndrome gene in human cancer. *Proc. Natl. Acad. Sci. USA* 103: 8822-8827.

CHROMOSOMAL LOCATION

Genetic locus: UTP23 (human) mapping to 8q24.11.

PRODUCT

UTP23 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 UTP23 shRNA Plasmid (h): sc-77525-SH and UTP23 shRNA (h) Lentiviral Particles: sc-77525-V as alternate gene silencing products.

For independent verification of UTP23 (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-77525A, sc-77525B and sc-77525C.

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

UTP23 siRNA (h) is recommended for the inhibition of UTP23 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor UTP23 gene expression knockdown using RT-PCR Primer: UTP23 (h)-PR: sc-77525-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.