SANTA CRUZ BIOTECHNOLOGY, INC.

TSGA10 siRNA (h): sc-94720

BACKGROUND

TSGA10 (testis specific, 10), also known as CT79 or CEP4L, is a 698 amino acid cytoplasmic and nuclear protein that localizes to the sperm tail as a fibrous sheath protein. Belonging to the CEP135/TSGA10 family, TSGA10 may play a role in the development of the sperm tail fibrous sheath, a major sperm tail structure, as well as active cell division, differentiation and migration of cells. TSGA10 accumulates in the midpiece of spermatozoa, where it co-localizes with HIF-1α. TSGA10 is expressed in cutaneous lymphoma, various tumour cell lines, testis, fetus, peripheral blood mononuclear cells, skin, isolated lymphocytes, keratinocytes, fibroblasts and acute leukemias, making it a candidate for immunotherapy and for detection of minimal residual disease (MRD), a small number of leukaemic cells that remain in a patient during treatment, or after treatment when the patient is in remission.

REFERENCES

1. Modarressi, M.H., et al. 2001. Identi-fication and characterisation of a novel gene, TSGA10, expressed in testis. Gene 262: 249-255.
2. Modarressi, M.H., et al. 2004. TSGA10 encodes a 65-kilodalton protein that is processed to the 27-kilodalton fibrous sheath protein. Biol. Reprod. 70: 608-615.
3. Tanaka, R., et al. 2004. Over-expression of the testis-specific gene TSGA10 in cancers and its immunogenicity. Microbiol. Immunol. 48: 339-345.
4. Theinert, S.M., et al. 2005. Identification of the testis-specific protein 10 (TSGA10) as serologically defined tumour-associated antigen in primary cutaneous T-cell lymphoma. Br. J. Dermatol. 153: 639-641.
5. Behnam, B., et al. 2006. Expression of TSGA10 sperm tail protein in embryogenesis and neural development: from cilium to cell division. Biochem. Biophys. Res. Commun. 344: 1102-1110.
6. Hägele, S., et al. 2006. TSGA10 prevents nuclear localization of the hypoxia-inducible factor (HIF)-1α. FEBS Lett. 580: 3731-3738.
7. Mobasheri, M.B., et al. 2006. Expression of the testis-specific gene, TSGA10, in Iranian patients with acute lymphoblastic leukemia (ALL). Leuk. Res. 30: 883-889.

CHROMOSOMAL LOCATION

Genetic locus: TSGA10 (human) mapping to 2q11.2.

PRODUCT

TSGA10 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 TSGA10 shRNA Plasmid (h): sc-94720-SH and TSGA10 shRNA (h) Lentiviral Particles: sc-94720-V as alternate gene silencing products.

For independent verification of TSGA10 (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-94720A, sc-94720B and sc-94720C.

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

TSGA10 siRNA (h) is recommended for the inhibition of TSGA10 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TSGA10 gene expression knockdown using RT-PCR Primer: TSGA10 (h)-PR: sc-94720-PR (20 µl). 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.