SANTA CRUZ BIOTECHNOLOGY, INC.

USP26 siRNA (m): sc-61764

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ubiquitin specific peptidase 26 (USP26) is a deubiquitinating enzyme that is a member of the peptidase c19 family and contains Cys and His domains and one ubp-type zinc finger. USP26 plays a role in negative regulation of gluconeogenesis and is required for proteosome-dependent catabolite degredation of fructose-1,6-bisphosphate. It is involved with the 26S proteasome in the ubiquitin-dependent proteolytic pathway. USP26 accelerates proteosomal breakdown of ubiquitinated proteins, while disassembling free ubiquitin chains. The catalytic activity of USP26 involves the combination of the ubiquitin carboxyl-terminal thiolester and water to produce ubiquitin and a thiol. USP26 is likely located in the cytoplasm and is specfically expressed in testis tissue. The gene maps to the X chromosome. Alterations in the gene are associated with Sertoli cell-only syndrome and male infertility.

REFERENCES

1. Wang, P.J., et al. 2001. An abundance of X-linked genes expressed in spermatogonia. Nat. Genet. 27: 422-426.
2. Paduch, D.A., et al. 2005. Novel mutations in testis-specific ubiquitin protease 26 gene may cause male infertility and hypogonadism. Reprod. Biomed. Online 10: 747-754.
3. Stouffs, K., et al. 2005. Possible role of USP26 in patients with severely impaired spermatogenesis. Eur. J. Hum. Genet. 13: 336-340.
4. Devoy, A., et al. 2005. The ubiquitin-proteasome system and cancer. Essays Biochem. 41: 187-203.
5. Ravel, C., et al. 2006. Haplotypes, mutations and male fertility: the story of the testis-specific ubiquitin protease USP26. Mol. Hum. Reprod. 12: 643-646.
6. Carrell, D.T., et al. 2006. The genetics of male infertility: a field of study whose time is now. Arch. Androl. 52: 269-274.

CHROMOSOMAL LOCATION

Genetic locus: Usp26 (mouse) mapping to X A5.

PRODUCT

USP26 siRNA (m) 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 USP26 shRNA Plasmid (m): sc-61764-SH and USP26 shRNA (m) Lentiviral Particles: sc-61764-V as alternate gene silencing products.

For independent verification of USP26 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61764A, sc-61764B and sc-61764C.

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 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

USP26 siRNA (m) is recommended for the inhibition of USP26 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 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 USP26 gene expression knockdown using RT-PCR Primer: USP26 (m)-PR: sc-61764-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.