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# Tektin 4 siRNA (m): sc-154184

## BACKGROUND

The Tektin proteins comprise a family of insoluble, alpha-helical, filament-forming peptides that interact with Tubulins and, via this interaction, form flagellar and ciliary microtubules. Tektin 4, also known as TEKT4, is a 435 amino acid protein belonging to the tektin family. Localizing to cytoplasm as well as haploid round spermatids in testis, Tektin 4 is expressed in the abaxial surface of outer dense fibers (ORFs) in sperm flagella. Deletion of Tektin 4 is associated with uncoordinated waveform propagation and reduced velocity of sperm flagellum, resulting in subfertility. Tektin 4 may also function as a structural component by forming filamentous polymers of ciliary and flagellar microtubules. The gene encoding Tektin 4 maps to human chromosome 2q11.1. The second largest human chromosome, chromosome 2 consists of 237 million bases, encodes over 1,400 genes and makes up approximately 8% of the human genome.

## REFERENCES

1. Jdo, J.W., Baldini, A., Ward, D.C., Reeders, S.T. and Wells, R.A. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. *Proc. Natl. Acad. Sci. USA* 88: 9051-9055.
2. Stephens, R.E. and Lemieux, N.A. 1998. Tektins as structural determinants in basal bodies. *Cell Motil. Cytoskeleton* 40: 379-392.
3. Cao, W., Gerton, G.L. and Moss, S.B. 2006. Proteomic profiling of accessory structures from the mouse sperm flagellum. *Mol. Cell. Proteomics* 5: 801-810.
4. Iida, H., Honda, Y., Matsuyama, T., Shibata, Y. and Inai, T. 2006. Tektin 4 is located on outer dense fibers, not associated with axonemal Tubulins of flagella in rodent spermatozoa. *Mol. Reprod. Dev.* 73: 929-936.
5. Roy, A., Lin, Y.N., Agno, J.E., DeMayo, F.J. and Matzuk, M.M. 2007. Absence of Tektin 4 causes asthenozoospermia and subfertility in male mice. *FASEB J.* 21: 1013-1025.
6. Amos, L.A. 2008. The Tektin family of microtubule-stabilizing proteins. *Genome Biol.* 9: 229.
7. Zuccarello, D., Ferlin, A., Garolla, A., Pati, M.A., Moretti, A., Cazzadore, C., Francavilla, S. and Foresta, C. 2008. A possible association of a human Tektin-t gene mutation (A229V) with isolated non-syndromic asthenozoospermia: case report. *Hum. Reprod.* 23: 996-1001.
8. Roy, A., Lin, Y.N., Agno, J.E., DeMayo, F.J. and Matzuk, M.M. 2009. Tektin 3 is required for progressive sperm motility in mice. *Mol. Reprod. Dev.* 76: 453-459.

## CHROMOSOMAL LOCATION

Genetic locus: Tekt4 (mouse) mapping to 17 A3.3.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## PRODUCT

Tektin 4 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Tektin 4 shRNA Plasmid (m): sc-154184-SH and Tektin 4 shRNA (m) Lentiviral Particles: sc-154184-V as alternate gene silencing products.

For independent verification of Tektin 4 (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-154184A, sc-154184B and sc-154184C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Tektin 4 siRNA (m) is recommended for the inhibition of Tektin 4 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  $\mu$ M in 66  $\mu$ 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 Tektin 4 gene expression knockdown using RT-PCR Primer: Tektin 4 (m)-PR: sc-154184-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.