

# ZSWIM3 siRNA (m): sc-155844

## BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. ZSWIM3 (zinc finger SWIM domain-containing protein 3) is a 696 amino acid protein that contains one SWIM-type zinc finger. SWIM domains are found in a variety of eukaryotic and prokaryotic proteins and are thought to be critical for certain ubiquitination reactions. The gene encoding ZSWIM3 maps to human chromosome 20, which contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome.

## REFERENCES

1. Klug, A. 1999. Zinc finger peptides for the regulation of gene expression. *J. Mol. Biol.* 293: 215-218.
2. Laity, J.H., Lee, B.M. and Wright, P.E. 2001. Zinc finger proteins: new insights into structural and functional diversity. *Curr. Opin. Struct. Biol.* 11: 39-46.
3. Matthews, J.M. and Sunde, M. 2002. Zinc fingers—folds for many occasions. *IUBMB Life* 54: 351-355.
4. Hall, T.M. 2005. Multiple modes of RNA recognition by zinc finger proteins. *Curr. Opin. Struct. Biol.* 15: 367-373.
5. Nishito, Y., Hasegawa, M., Inohara, N. and Núñez, G. 2006. MEX is a testis-specific E3 ubiquitin ligase that promotes death receptor-induced apoptosis. *Biochem. J.* 396: 411-417.
6. Tucker, E.S., Segall, S., Gopalakrishna, D., Wu, Y., Vernon, M., Polleux, F. and Lamantia, A.S. 2008. Molecular specification and patterning of progenitor cells in the lateral and medial ganglionic eminences. *J. Neurosci.* 28: 9504-9518.
7. Lin, R., Teng, Y., Park, H.J., Ding, L., Black, C., Fang, P. and Wang, H. 2008. Discrete and essential roles of the multiple domains of *Arabidopsis* FHY3 in mediating phytochrome A signal transduction. *Plant Physiol.* 148: 981-992.

## CHROMOSOMAL LOCATION

Genetic locus: Zswim3 (mouse) mapping to 2 H3.

## PRODUCT

ZSWIM3 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 ZSWIM3 shRNA Plasmid (m): sc-155844-SH and ZSWIM3 shRNA (m) Lentiviral Particles: sc-155844-V as alternate gene silencing products.

For independent verification of ZSWIM3 (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-155844A, sc-155844B and sc-155844C.

## 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

ZSWIM3 siRNA (m) is recommended for the inhibition of ZSWIM3 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 ZSWIM3 gene expression knockdown using RT-PCR Primer: ZSWIM3 (m)-PR: sc-155844-PR (20  $\mu$ 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](http://www.scbt.com) for detailed protocols and support products.