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# YME1L1 siRNA (m): sc-155413

## BACKGROUND

YME1L1 (YME1-like 1 (*S. cerevisiae*)), also known as ATP-dependent zinc metalloprotease YME1L1, PAMP (presenilin-associated metalloprotease), MEG4 or FTSH, is a 773 amino acid mitochondrial protein that belongs to the AAA ATPase and peptidase M41 families. Thought to function as an ATP-dependent protease, YME1L1 plays a role in mitochondrial protein metabolism and assists in OPA1 (optic atrophy 1) processing. YME1L1 exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 10p12.1. Chromosome 10 contains over 800 genes, 135 million nucleotides, and comprises nearly 4.5% of the human genome. PTEN is an important tumor suppressor gene located on chromosome 10q23.31 and, when defective, causes a genetic predisposition to cancer development known as Cowden syndrome.

## REFERENCES

- Shah, Z.H., Hakkaart, G.A., Arku, B., de Jong, L., van der Spek, H., Grivell, L.A. and Jacobs, H.T. 2000. The human homologue of the yeast mitochondrial AAA metalloprotease Yme1p complements a yeast yme1 disruptant. *FEBS Lett.* 478: 267-270.
- Coppola, M., Pizzigoni, A., Banfi, S., Bassi, M.T., Casari, G. and Incerti, B. 2000. Identification and characterization of YME1L1, a novel paraplegin-related gene. *Genomics* 66: 48-54.
- Pellegrini, L., Passer, B.J., Canelles, M., Lefterov, I., Ganjei, J.K., Fowlkes, B.J., Koonin, E.V. and D'Adamio, L. 2001. PAMP and PARL, two novel putative metalloproteases interacting with the COOH-terminus of Presenilin-1 and -2. *J. Alzheimers Dis.* 3: 181-190.
- Teresi, R.E., Zbuk, K.M., Pezzolesi, M.G., Waite, K.A. and Eng, C. 2007. Cowden syndrome-affected patients with PTEN promoter mutations demonstrate abnormal protein translation. *Am. J. Hum. Genet.* 81: 756-767.
- Cho, M.Y., Kim, H.S., Eng, C., Kim, D.S., Kang, S.J., Eom, M., Yi, S.Y. and Bronner, M.P. 2008. First report of ovarian dysgerminoma in Cowden syndrome with germline PTEN mutation and PTEN-related 10q loss of tumor heterozygosity. *Am. J. Surg. Pathol.* 32: 1258-1264.
- Guillery, O., Malka, F., Landes, T., Guillou, E., Blackstone, C., Lombès, A., Belenguer, P., Arnoult, D. and Rojo, M. 2008. Metalloprotease-mediated OPA1 processing is modulated by the mitochondrial membrane potential. *Biol. Cell* 100: 315-325.
- Yin, Y. and Shen, W.H. 2008. PTEN: a new guardian of the genome. *Oncogene* 27: 5443-5453.

## CHROMOSOMAL LOCATION

Genetic locus: Yme1l1 (mouse) mapping to 2 A3.

## PRODUCT

YME1L1 siRNA (m) is a target-specific 19-25 nt siRNA 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 YME1L1 shRNA Plasmid (m): sc-155413-SH and YME1L1 shRNA (m) Lentiviral Particles: sc-155413-V as alternate gene silencing 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  $\mu$ 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

YME1L1 siRNA (m) is recommended for the inhibition of YME1L1 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 YME1L1 gene expression knockdown using RT-PCR Primer: YME1L1 (m)-PR: sc-155413-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.