

# CLN8 siRNA (m): sc-60412

## BACKGROUND

CLN8, a 286 amino acid transmembrane protein, localizes mainly to the endoplasmic reticulum, but also partially to the ER-Golgi intermediate compartment (ERGIC). Mutations in the CLN8 gene cause neuronal ceroid lipofuscinosis 8 and progressive epilepsy with mental retardation (EPMR). Both disorders are forms of neuronal ceroid-lipofuscinosis (NCL), a group of progressive neurodegenerative diseases found in children, characterized by failure of psychomotor development, impaired vision, seizures and premature death. The CLN8 protein is one of eight proteins in the CLN family, including CLN1-CLN7, which are associated with NCL.

## REFERENCES

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3. Mole, S.E., et al. 2005. Correlations between genotype, ultrastructural morphology and clinical phenotype in the neuronal ceroid lipofuscinoses. *Neurogenetics* 6: 107-126.
4. Wendt, K.D., et al. 2005. Behavioral assessment in mouse models of neuronal ceroid lipofuscinosis using a light-cued T-maze. *Behav. Brain Res.* 161: 175-182.
5. Lonka, L., et al. 2005. The neuronal ceroid lipofuscinosis CLN8 gene expression is developmentally regulated in mouse brain and upregulated in the hippocampal kindling model of epilepsy. *BMC Neurosci.* 6: 27.
6. Katz, M.L., et al. 2005. A mutation in the CLN8 gene in English Setter dogs with neuronal ceroid-lipofuscinosis. *Biochem. Biophys. Res. Commun.* 327: 541-547.
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## CHROMOSOMAL LOCATION

Genetic locus: Cln8 (mouse) mapping to 8 A1.1.

## PRODUCT

CLN8 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 CLN8 shRNA Plasmid (m): sc-60412-SH and CLN8 shRNA (m) Lentiviral Particles: sc-60412-V as alternate gene silencing products.

For independent verification of CLN8 (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-60412A, sc-60412B and sc-60412C.

## 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

CLN8 siRNA (m) is recommended for the inhibition of CLN8 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 CLN8 gene expression knockdown using RT-PCR Primer: CLN8 (m)-PR: sc-60412-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.