SANTA CRUZ BIOTECHNOLOGY, INC.

MANEA siRNA (h): sc-95094

BACKGROUND

MANEA (mannosidase, endo-α), also known as Mandaselin, glycoprotein endo-α-1,2-mannosidase, endomannosidase or ENDO, is a 462 amino acid single-pass type II membrane protein of the Golgi apparatus that cleaves the α-1,2-mannosidic bonds linking mono-, di- and triglucosylmannose oligosaccharides to high-mannose glycans, thereby catalyzing their release. A member of the glycosyl hydrolase 99 family and subject to C-terminal post-translational proteolytic cleavage, MANEA is highly expressed in kidney and liver, with lower levels of expression in brain, placenta, lung, muscle, heart and pancreas. The gene encoding MANEA maps to human chromosome 6q16.1, and is considered a potential candidate in cocaine-induced paranoia (CIP).

REFERENCES

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2. Herscovics, A. 1999. Importance of glycosidases in mammalian glycoprotein biosynthesis. Biochim. Biophys. Acta 1473: 96-107.
3. Hardt, B., et al. 2005. Human endo-α-1,2-mannosidase is a Golgi-resident type II membrane protein. Biochimie 87: 169-179.
4. Hamilton, S.R., et al. 2005. Intact α-1,2-endomannosidase is a typical type II membrane protein. Glycobiology 15: 615-624.
5. Yu, Y., et al. 2008. Substance dependence low-density whole genome association study in two distinct American populations. Hum. Genet. 123: 495-506.
6. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612327. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Farrer, L.A., et al. 2009. Association of variants in MANEA with cocaine-related behaviors. Arch. Gen. Psychiatry 66: 267-274.

CHROMOSOMAL LOCATION

Genetic locus: MANEA (human) mapping to 6q16.1.

PRODUCT

MANEA siRNA (h) 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 MANEA shRNA Plasmid (h): sc-95094-SH and MANEA shRNA (h) Lentiviral Particles: sc-95094-V as alternate gene silencing products.

For independent verification of MANEA (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-95094A, sc-95094B and sc-95094C.

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

MANEA siRNA (h) is recommended for the inhibition of MANEA expression in human 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 MANEA gene expression knockdown using RT-PCR Primer: MANEA (h)-PR: sc-95094-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.