SANTA CRUZ BIOTECHNOLOGY, INC.

MANBAL siRNA (h): sc-75746

BACKGROUND

MANBAL (mannosidase, β A, lysosomal-like) is an 85 amino acid single-pass membrane protein belonging to the UPF0239 family that may have similar functions as MANBA (mannosidase, β A, lysosomal). MANBA is an exo-glycosidase that cleaves the single β-linked mannose residue from the non-reducing end of all N-linked glycoprotein oligosaccharides. Defects in the gene encoding MANBA are the cause of a mild disorder that affects myelin of the peripheral and central nervous systems. MANBAL is encoded by a gene located on human chromosome 20, which is comprised of approximately 2% of the human genome, chromosome 20 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. Additionally, chromosome 20 contains a region with numerous genes which are thought important for seminal production and may be potential targets for male contraception.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: MANBAL (human) mapping to 20q11.23.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

MANBAL 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 MANBAL shRNA Plasmid (h): sc-75746-SH and MANBAL shRNA (h) Lentiviral Particles: sc-75746-V as alternate gene silencing products.

For independent verification of MANBAL (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-75746A, sc-75746B and sc-75746C.

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

MANBAL siRNA (h) is recommended for the inhibition of MANBAL 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 MANBAL gene expression knockdown using RT-PCR Primer: MANBAL (h)-PR: sc-75746-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.