SANTA CRUZ BIOTECHNOLOGY, INC.

CYBASC3 siRNA (m): sc-37376

BACKGROUND

Cytochrome c is a well characterized mobile electron transport protein essential to energy conversion in all aerobic organisms. Cytochrome b associates with cytochrome c and the Rieske protein to form complex III (also referred to as the cytochrome bc1 complex), which is involved in cellular respiration. Ascorbate-dependent (CYBASC) cytochromes represent a family including cytochrome b561 of animal chromaffin granules and cytochrome b ascorbate dependent 3 (CYBASC3). Members of this family are found in most eukaryotic cells. CYBASC3 is a 242 amino acid protein that is highly expressed in the adrenal gland, spleen, and tonsil tissue.

REFERENCES

1. Maruyama, K., et al. 1994. Oligo-capping: a simple method to replace the cap structure of eukaryotic mRNAs with oligoribonucleotides. Gene 138: 171-174.
2. Suzuki, Y., et al. 1997. Construction and characterization of a full length-enriched and a 5'-end-enriched cDNA library. Gene 200: 149-156.
3. May, J.M., et al. 1999. Ascorbate-dependent electron transfer across the human erythrocyte membrane. Biochim. Biophys. Acta 1421: 19-31.
4. Preger, V., et al. 2001. Ascorbate-independent electron transfer between cytochrome b561 and a 27 kDa ascorbate peroxidase of bean hypocotyls. Protoplasma 217: 137-145.
5. Seike, Y., et al. 2003. Reversely-oriented cytochrome b561 in reconstituted vesicles catalyzes transmembrane electron transfer and supports extravesicular dopamine β-hydroxylase activity. J. Biochem. 134: 859-867.
6. Preger, V., et al. 2005. Identification of an ascorbate-dependent cytochrome b of the tonoplast membrane sharing biochemical features with members of the cytochrome b561 family. Planta 220: 365-375.
7. Su, D., et al. 2006. Three mammalian cytochromes b561 are ascorbate-dependent ferrireductases. FEBS J. 273: 3722-3734.

CHROMOSOMAL LOCATION

Genetic locus: Cybasc3 (mouse) mapping to 19 A.

PRODUCT

CYBASC3 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CYBASC3 shRNA Plasmid (m): sc-37376-SH and CYBASC3 shRNA (m) Lentiviral Particles: sc-37376-V as alternate gene silencing products.

For independent verification of CYBASC3 (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-37376A, sc-37376B and sc-37376C.

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

CYBASC3 siRNA (m) is recommended for the inhibition of CYBASC3 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 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 CYBASC3 gene expression knockdown using RT-PCR Primer: CYBASC3 (m)-PR: sc-37376-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.