SANTA CRUZ BIOTECHNOLOGY, INC.

Cryptic siRNA (m): sc-60454

BACKGROUND

Cryptic is a 224 amino acid member of the epidermal growth factor-Cripto-1/FRL1/Cryptic family that consists of extracellular and cell-associated proteins which function as co-receptors for the transforming growth factor β subfamily of proteins. Cryptic is involved in the appropriate establishment of the left-right axis of the organism, and it may play a role in the development of mesoderm and/or neural patterning during gastrulation. Loss-of-function mutations in CFC1, the gene encoding for Cryptic, are associated with human left-right laterality defects. Defects in CFC1 also cause visceral heterotaxy (HTX2), an autosomal disease characterized by a variable group of congenital anomalies that include complex cardiac malformations such as conotruncal heart malformations that may lead to cardiac outflow tract defects, pulmonary atresia, double-outlet right ventricle, truncus arteriosus communis and aortic arch anomalies.

REFERENCES

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2. Shen, M.M. and Schier, A.F. 2000. The EGF-CFC gene family in vertebrate development. Trends Genet. 16: 303-309.
3. Bamford, R.N., et al. 2000. Loss-of-function mutations in the EGF-CFC gene CFC1 are associated with human left-right laterality defects. Nat. Genet. 26: 365-369.
4. Goldmuntz, E., et al. 2002. CFC1 mutations in patients with transposition of the great arteries and double-outlet right ventricle. Am. J. Hum. Genet. 70: 776-780.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605194. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Hu, X.F. and Xing, P.X. 2005. Cripto as a target for cancer immunotherapy. Expert Opin. Ther. Targets 9: 383-394.

CHROMOSOMAL LOCATION

Genetic locus: Cfc1 (mouse) mapping to 1 B.

PRODUCT

Cryptic 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 Cryptic shRNA Plasmid (m): sc-60454-SH and Cryptic shRNA (m) Lentiviral Particles: sc-60454-V as alternate gene silencing products.

For independent verification of Cryptic (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-60454A, sc-60454B and sc-60454C.

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

Cryptic siRNA (m) is recommended for the inhibition of Cryptic 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 Cryptic gene expression knockdown using RT-PCR Primer: Cryptic (m)-PR: sc-60454-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.