SANTA CRUZ BIOTECHNOLOGY, INC.

EF-HC2 siRNA (h): sc-91117

BACKGROUND

EF-HC2 (EF-hand domain-containing family member C2) is a 749 amino acid protein containing 3 DM10 domains and an EF-hand domain. EF-HC2 shares 41.6% homology with EF-HC1, and is widely expressed in peripheral tissues and central nervous system. The gene encoding EF-HC2 maps to human chromosome Xp11.3 and is critical for recognition of facial fear and harm avoidance. Turner syndrome, characterized by deficits in social cognition and recognition of facial fear, has been linked to the EF-HC2 gene. Deletion of the EF-HC2 gene may be associated with Norrie disease, an X-linked disorder that primarily effects the eye, and may also be linked to juvenile myoclonic epilepsy. EF-HC2 exists as two isoforms due to alternative splicing events.

REFERENCES

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3. Setter, P.W., et al. 2006. Tektin interactions and a model for molecular functions. Exp. Cell Res. 312: 2880-2896.
4. Rodriguez-Revenga, L., et al. 2007. Contiguous deletion of the NDP, MAOA, MAOB, and EFHC2 genes in a patient with Norrie disease, severe psychomotor retardation and myoclonic epilepsy. Am. J. Med. Genet. A 143A: 916-920.
5. Weiss, L.A., et al. 2007. Identification of EFHC2 as a quantitative trait locus for fear recognition in Turner syndrome. Hum. Mol. Genet. 16: 107-113.
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7. Zinn, A.R., et al. 2008. EFHC2 SNP rs7055196 is not associated with fear recognition in 45,X Turner syndrome. Am. J. Med. Genet. B Neuropsychiatr. Genet. 147B: 507-509.
8. Blaya, C., et al. 2009. Preliminary evidence of association between EFHC2, a gene implicated in fear recognition, and harm avoidance. Neurosci. Lett. 452: 84-86.

CHROMOSOMAL LOCATION

Genetic locus: EFHC2 (human) mapping to Xp11.3.

PRODUCT

EF-HC2 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 EF-HC2 shRNA Plasmid (h): sc-91117-SH and EF-HC2 shRNA (h) Lentiviral Particles: sc-91117-V as alternate gene silencing products.

For independent verification of EF-HC2 (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-91117A, sc-91117B and sc-91117C.

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

EF-HC2 siRNA (h) is recommended for the inhibition of EF-HC2 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 EF-HC2 gene expression knockdown using RT-PCR Primer: EF-HC2 (h)-PR: sc-91117-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.

PROTOCOLS

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