



ECEL1 siRNA (h): sc-106909

BACKGROUND

ECEL1 (endothelin-converting enzyme-like 1, also designated XCE and DINE, damage-induced neuronal endopeptidase) is a member of the family of cell-surface zinc metalloproteases. This family of metalloproteases includes endothelin-converting enzyme (ECE) and neutral endopeptidase (NEP). These peptidases are involved in the post-secretory processing and metabolism of neuropeptides and peptide hormones. Following neuronal damage, proteolytic activity of ECEL1 activates antioxidant enzymes suggesting a mechanism for how injured neurons protect themselves against death. Glycosylated ECEL1 is predominantly expressed in the central nervous system, including the spinal cord and medulla.

REFERENCES

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2. Turner, A.J., et al. 1997. Mammalian membrane metalloproteases: NEP, ECE, KELL, and PEX. *FASEB J.* 11: 355-364.
3. Gomazkov, O.A. 1998. Endothelin-converting enzyme: its functional aspect. *Biochemistry* 63: 125-132.
4. Schweizer, A., et al. 1999. Neonatal lethality in mice deficient in XCE, a novel member of the endothelin-converting enzyme and neutral endopeptidase family. *J. Biol. Chem.* 274: 20450-20456.
5. Valdenaire, O., et al. 1999. XCE, a new member of the endothelin-converting enzyme and neutral endopeptidase family, is preferentially expressed in the CNS. *Brain Res. Mol. Brain Res.* 64: 211-221.
6. Valdenaire, O., et al. 2000. Organization and chromosomal localization of the human ECEL1 (XCE) gene encoding a zinc metalloprotease involved in the nervous control of respiration. *Biochem. J.* 346: 611-616.
7. Kiryu-Seo, S., et al. 2000. Damage-induced neuronal endopeptidase (DINE) is a unique metallo-peptidase expressed in response to neuronal damage and activates superoxide scavengers. *Proc. Natl. Acad. Sci. USA* 97: 4345-4350.

CHROMOSOMAL LOCATION

Genetic locus: ECEL1 (human) mapping to 2q37.1.

PRODUCT

ECEL1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ECEL1 shRNA Plasmid (h): sc-106909-SH and ECEL1 shRNA (h) Lentiviral Particles: sc-106909-V as alternate gene silencing products.

For independent verification of ECEL1 (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-106909A, sc-106909B and sc-106909C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

ECEL1 siRNA (h) is recommended for the inhibition of ECEL1 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 μ M in 66 μ l. 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 ECEL1 gene expression knockdown using RT-PCR Primer: ECEL1 (h)-PR: sc-106909-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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