

# ECEL1 (N-20): sc-11338

## 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 metallo-peptidases. 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

1. Shipp, M.A. and Look, A.T. 1993. Hematopoietic differentiation antigens that are membrane-associated enzymes: cutting is the key! *Blood* 82: 1052-1070.
2. Turner, A.J. and Tanzawa, K. 1997. Mammalian membrane metallopeptidases: 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., Valdenaire, O., Koster, A., Lang, Y., Schmitt, G., Lenz, B., Bluethmann, H. and Rohrer, J. 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., Richards, J.G., Faull, R.L.M. and Schweizer, A. 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., Rohrbacher, E., Langeveld, A., Schweizer, A. and Meijers, C. 2000. Organization and chromosomal localization of the human ECEL1 (XCE) gene encoding a zinc metallopeptidase involved in the nervous control of respiration. *Biochem. J.* 346: 611-616.
7. Kiryu-Seo, S., Sasaki, M., Yokohama, H., Nakagomi, S., Hirayama, T., Aoki, S., Wada, K. and Kiyama, H. 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 LOCATIONS

Genetic locus: ECEL1 (human) mapping to 2q37.1; Ecel1 (mouse) mapping to 1 D.

## SOURCE

ECEL1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of ECEL1 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11338 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ECEL1 (N-20) is recommended for detection of ECEL1 (also designated XCE or DINE) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ECEL1 (N-20) is also recommended for detection of ECEL1 (also designated XCE or DINE) in additional species, including canine, porcine and avian.

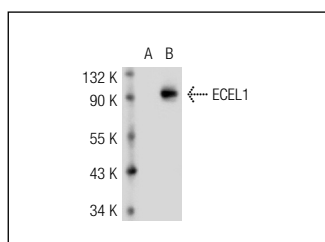
Suitable for use as control antibody for ECEL1 siRNA (h): sc-106909, ECEL1 siRNA (m): sc-143281, ECEL1 shRNA Plasmid (h): sc-106909-SH, ECEL1 shRNA Plasmid (m): sc-143281-SH, ECEL1 shRNA (h) Lentiviral Particles: sc-106909-V and ECEL1 shRNA (m) Lentiviral Particles: sc-143281-V.

Positive Controls: ECEL1 (h): 293T Lysates: sc-116127.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



ECEL1 (N-20): sc-11338. Western blot analysis of ECEL1 expression in non-transfected: sc-117752 (A) and human ECEL1 transfected: sc-116127 (B) 293T whole cell lysates.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\* Stable for one year from the date of shipment. Non-hazardous. No MSDS required.