

ECE-2 (C-17): sc-27559

BACKGROUND

Endothelin converting enzymes (ECE-1 and ECE-2) are type II metalloproteases that convert big endothelin-1 to vasoactive endothelin-1. Both ECE-1 and ECE-2 belong to the peptidase family M13 and are Type II membrane proteins. There are several different isoforms of each ECE protein and the expression of the protein may therefore vary. All isoforms are expressed in umbilical endothelial cells, atrium cardiomyocytes and ventricles, polynuclear neutrophils and fibroblasts. Endothelin-converting enzyme-2 (ECE-2) converts big endothelin-1 to endothelin-1 by catalyzing the cleavage of the precursor into active peptides, including cleavage at trp21-val22. The ECE-2 gene produces unique isoforms that share the same extracellular catalytic domain and contain unique N-terminal cytoplasmic tails.

REFERENCES

- Schmidt, M., Kroger, B., Jacob, E., Seulberger, H., Subkowski, T., Otter, R., Meyer, T., Schmalzing, G. and Hillen, H. 1994. Molecular characterization of human and bovine endothelin converting enzyme (ECE-1). *FEBS Lett.* 356: 238-243.
- Ikeda, S., Emoto, N., Alimsardjono, H., Yokoyama, M. and Matsuo, M. 2002. Molecular isolation and characterization of novel four subisoforms of ECE-2. *Biochem. Biophys. Res. Commun.* 293: 421-426.
- Muller, L., Barret, A., Etienne, E., Meidan, R., Valdenaire, O., Corvol, P. and Tougaard, C. 2003. Heterodimerization of endothelin-converting enzyme-1 isoforms regulates the subcellular distribution of this metalloprotease. *J. Biol. Chem.* 278: 545-555.
- Mzhavia, N., Pan, H., Che, F.Y., Fricker, L.D. and Devi, L.A. 2003. Characterization of endothelin-converting enzyme-2. Implication for a role in the nonclassical processing of regulatory peptides. *J. Biol. Chem.* 278: 14704-14711.
- LocusLink Report (LocusID: 1889). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: ECE2 (human) mapping to 3q27.1; Ece2 (mouse) mapping to 16 B1.

SOURCE

ECE-2 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of ECE-2 of human origin.

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-27559 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ECE-2 (C-17) is recommended for detection of ECE-2, isoforms A, B and C of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

ECE-2 (C-17) is also recommended for detection of ECE-2, isoforms A, B and C in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ECE-2 siRNA (h): sc-72158, ECE-2 siRNA (m): sc-72159, ECE-2 shRNA Plasmid (h): sc-72158-SH, ECE-2 shRNA Plasmid (m): sc-72159-SH, ECE-2 shRNA (h) Lentiviral Particles: sc-72158-V and ECE-2 shRNA (m) Lentiviral Particles: sc-72159-V.

Molecular Weight of ECE-2: 130 kDa.

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) 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.

RESEARCH USE

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

PROTOCOLS

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