

ECE-1 (F-16): sc-27557

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-1 (ECE-1) converts big endothelin-1 to endothelin-1 by catalyzing the cleavage of the Trp21-Val22 bond in the precursor. The ECE-1 gene produces four isoforms from alternate promoters. The isoforms share the same extracellular catalytic domain and contain unique cytosolic tails, which results in their specific subcellular targeting.

REFERENCES

- Schmidt, M., et al. 1994. Molecular characterization of human and bovine endothelin converting enzyme (ECE-1). *FEBS Lett.* 356: 238-243.
- Ikeda, S., et al. 2002. Molecular isolation and characterization of novel four subisoforms of ECE-2. *Biochem. Biophys. Res. Commun.* 293: 421-426.
- Muller, L., et al. 2003. Heterodimerization of endothelin-converting enzyme-1 isoforms regulates the subcellular distribution of this metalloprotease. *J. Biol. Chem.* 278: 545-555.
- Mzhavia, N., et al. 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: ECE1 (human) mapping to 1p36.12; Ece1 (mouse) mapping to 4 D3.

SOURCE

ECE-1 (F-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of ECE-1 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-27557 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.

PROTOCOLS

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

APPLICATIONS

ECE-1 (F-16) is recommended for detection of ECE-1, isoforms A, B, C and D 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-1 (F-16) is also recommended for detection of ECE-1, isoforms A, B, C and D in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ECE-1 siRNA (h): sc-44478, ECE-1 siRNA (m): sc-44479, ECE-1 shRNA Plasmid (h): sc-44478-SH, ECE-1 shRNA Plasmid (m): sc-44479-SH, ECE-1 shRNA (h) Lentiviral Particles: sc-44478-V and ECE-1 shRNA (m) Lentiviral Particles: sc-44479-V.

Molecular Weight of ECE-1: 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.

SELECT PRODUCT CITATIONS

- Reijerkerk, A., et al. 2011. Brain endothelial barrier passage by monocytes is controlled by the endothelin system. *J. Neurochem.* 121: 730-731.

RESEARCH USE

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


 MONOS
Satisfaction
Guaranteed

Try **ECE-1 (A-6): sc-376017** or **ECE-1 (C-12): sc-376018**, our highly recommended monoclonal alternatives to ECE-1 (F-16).