

ECE-1 (C-12): sc-376018

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.

CHROMOSOMAL LOCATION

Genetic locus: ECE1 (human) mapping to 1p36.12; Ece1 (mouse) mapping to 4 D3.

SOURCE

ECE-1 (C-12) is a mouse monoclonal antibody raised against amino acids 331-390 mapping within an extracellular domain of ECE-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ECE-1 (C-12) is recommended for detection of ECE-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

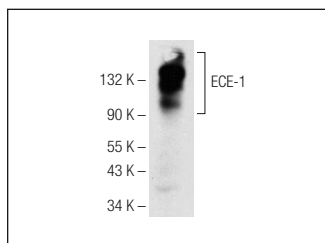
Molecular Weight of ECE-1: 130 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180.

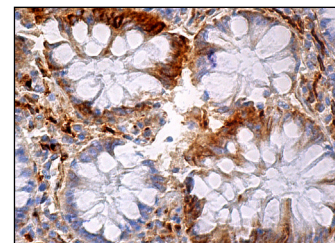
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



ECE-1 (C-12): sc-376018. Western blot analysis of ECE-1 expression in HUV-EC-C whole cell lysate.



ECE-1 (C-12): sc-376018. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Wu, C.F., et al. 2017. High endothelin-converting enzyme-1 expression independently predicts poor survival of patients with esophageal squamous cell carcinoma. *Tumour Biol.* 39: 1010428317725922.
- Xu, E.S., et al. 2019. ECE-1 overexpression in head and neck cancer is associated with poor tumor differentiation and patient outcome. *Oral Dis.* 25: 44-53.

STORAGE

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

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.