

ECE-1 (A-6): sc-376017

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.

CHROMOSOMAL LOCATION

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

SOURCE

ECE-1 (A-6) 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 IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ECE-1 (A-6) is available conjugated to agarose (sc-376017 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376017 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376017 PE), fluorescein (sc-376017 FITC), Alexa Fluor® 488 (sc-376017 AF488), Alexa Fluor® 546 (sc-376017 AF546), Alexa Fluor® 594 (sc-376017 AF594) or Alexa Fluor® 647 (sc-376017 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376017 AF680) or Alexa Fluor® 790 (sc-376017 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

ECE-1 (A-6) 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) 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.

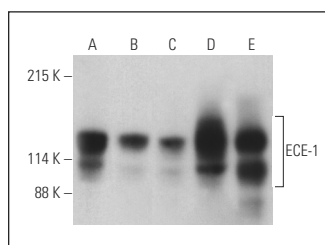
Molecular Weight of ECE-1: 130 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180, Hep G2 cell lysate: sc-2227 or Jurkat whole cell lysate: sc-2204.

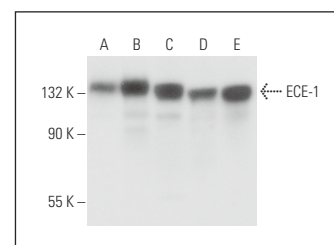
RECOMMENDED SUPPORT REAGENTS

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.

DATA



ECE-1 (A-6): sc-376017. Western blot analysis of ECE-1 expression in NCI-H1299 (A), A2058 (B), T-47D (C), PANC-1 (D) and HUV-EC-C (E) whole cell lysates. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.



ECE-1 (A-6): sc-376017. Western blot analysis of ECE-1 expression in Jurkat (A), Hep G2 (B), A2058 (C), T-47D (D) and NCI-H1299 (E) whole cell lysates.

SELECT PRODUCT CITATIONS

- Mahmoud, A.M., et al. 2016. Hyperinsulinemia augments endothelin-1 protein expression and impairs vasodilation of human skeletal muscle arterioles. *Physiol. Rep.* 4: e12895.
- Li, X., et al. 2017. Quantitative proteomic profiling of tachyplesin I targets in U251 gliomaspheres. *Mar. Drugs* 15: 20.
- Ruze, R., et al. 2020. Sleeve gastrectomy ameliorates endothelial function and prevents lung cancer by normalizing endothelin-1 axis in obese and diabetic rats. *World J. Gastroenterol.* 26: 2599-2617.
- Yaiw, K.C., et al. 2021. Human cytomegalovirus reduces endothelin-1 expression in both endothelial and vascular smooth muscle cells. *Microorganisms* 9: 1137.
- Dashzeveg, N.K., et al. 2023. Dynamic glycoprotein hyposialylation promotes chemotherapy evasion and metastatic seeding of quiescent circulating tumor cell clusters in breast cancer. *Cancer Discov.* 13: 2050-2071.

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 for detailed protocols and support products.

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