

Human ECE1 Protein (His Tag)

Catalog Number: 10887-H07H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

ECE; RP3-329E20.1

Protein Construction:

A DNA sequence encoding the extracellular domain of human ECE1 isoform B (P42892-1) (Gln 90-Trp 770) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: His

Molecular Mass:

The recombinant human ECE1 comprises 698 amino acids and has a predicted molecular mass of 80 kDa. As a result of glycosylation, rh ECE1 migrates as an approximately 125 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

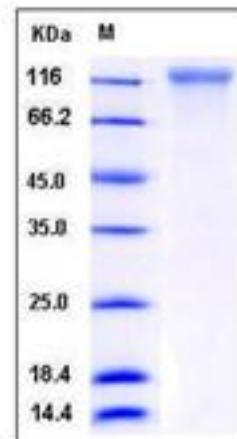
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Endothelin-converting enzyme 1, also known as ECE-1, is a single-pass type II membrane protein which belongs to the peptidase M13 family. ECE-1 converts big endothelin-1 to endothelin-1. ECE-1 is a membrane metalloprotease that generates endothelin from its direct precursor big endothelin. Four isoforms of ECE-1 are produced from a single gene through the use of alternate promoters. These isoforms share the same extracellular catalytic domain and contain unique cytosolic tails, which results in their specific subcellular targeting. All isoforms of ECE-1 are expressed in umbilical vein endothelial cells, polynuclear neutrophils, fibroblasts, atrium cardiomyocytes and ventricles. Isoforms A, B and C of ECE-1 are also expressed in placenta, lung, heart, adrenal gland and pheochromocytoma; isoforms A and C of ECE-1 in liver, testis and small intestine; isoform B, C and D of ECE-1 in endothelial cells and umbilical vein smooth muscle cells; isoforms C and D in saphenous vein cells, and isoform C in kidney. Defects in ECE1 are a cause of Hirschsprung disease, cardiac defects and autonomic dysfunction. It is a form of Hirschsprung disease with skip-lesions defects, craniofacial abnormalities and other dysmorphic features, and autonomic dysfunction.

References

1. Yorimitsu K., *et al.*, (1995), Cloning and sequencing of a human endothelin converting enzyme in renal adenocarcinoma (ACHN) cells producing endothelin-2. *Biochem. Biophys. Res. Commun.* 208:721-727.
2. Shimada K., *et al.*, (1995), Cloning and functional expression of human endothelin-converting enzyme cDNA. *Biochem. Biophys. Res. Commun.* 207:807-812.
3. Valdenaire O., *et al.*, (1995), Organization of the gene encoding the human endothelin-converting enzyme (ECE-1). *J. Biol. Chem.* 270:29794-29798.

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