Data Sheet (Cat.No.TMPY-00782)

TargetMol

ECE2 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	endothelin converting enzyme 2;KIAA0604;UNQ403/PRO740
Protein Construction:	A DNA sequence encoding the ectodomain of human endothelin converting enzyme 2 isoform A (NP_055508.3) (Gly 199-Trp 883) was fused with the Fc region of human IgG1 at the N-terminus. Predicted N terminal: Glu 20
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P0DPD8
Molecular Weight:	105 kDa (predicted); 120-130 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 100 mM Glycine, 10 mM NaCl, 50 mM Tris, pH 7.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Endothelin-converting enzyme 2, also known as ECE-2, is a metalloprotease that possesses many properties consistent with it being a neuropeptide-processing enzyme. Endothelin-converting enzymes (ECEs) are the key enzymes in the endothelin (ET) biosynthesis that catalyze the conversion of big ET, the biologically inactive precursor of mature ET. Two enzymes, termed ECE-1 and ECE-2, have been molecularly identified. ECE-2 is found

primarily in neural tissues, with high levels of expression in midbrain, cerebellum, hypothalamus, frontal cortex and spinal cord and moderate levels in hippocampus and striatum. ECE-2 is strongly down-regulated in inferior parietal lobe from Alzheimer disease patients (at protein level). ECE-2 converts big endothelin-1 to endothelin-1. It is involved in the processing of various neuroendocrine peptides, including neurotensin, angiotensin I, substance P, proenkephalin-derived peptides, and prodynorphin-derived peptides. ECE-2 may limit beta-amyloid peptide accumulation in brain. It may also have methyltransferase activity. A comparison of residues around the cleavage site revealed that ECE-2 exhibits a unique cleavage site selectivity that is related to but distinct from that of ECE-1.

Reference

Lorenzo M.-N.,et al.,(2001), Human endothelin converting enzyme-2 (ECE2): characterization of mRNA species and chromosomal localization. Biochim. Biophys. Acta 1522:46-52.

Muzny D.M.,et al., (2006), The DNA sequence, annotation and analysis of human chromosome 3.Nature 440:1194-1198.

Nagase T.,et al.,(1998), Prediction of the coding sequences of unidentified human genes. IX. The complete sequences of 100 new cDNA clones from brain which can code for large proteins in vitro.DNA Res. 5:31-39.