Data Sheet (Cat.No.TMPY-03464)

TargetMol

ECH1 Protein, Human, Recombinant (His)

General Information

Synonyms:	enoyl CoA hydratase 1, peroxisomal;HPXEL
Protein Construction:	A DNA sequence encoding the mature form of human ECH1 (Q13011) (Thr34-Leu328) was expressed with a polyhistide tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	Q13011
Molecular Weight:	34 kDa (predicted); 34 kDa (reducing conditions)

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:	> 90 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 0.1M NaCl, 10% Glycerol, pH 8.0.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

ECH1 is a member of the hydratase/isomerase superfamily. ECH1 shows high sequence similarity to enoyl-CoA hydratases of several species, particularly within a conserved domain characteristic of these proteins. ECH1 contains a C-terminal peroxisomal targeting sequence and localizes to peroxisomes. The rat ortholog, which localizes to the matrix of both the peroxisome and mitochondria, can isomerize 3-trans, 5-cis-dienoyl-CoA to 2-trans,4-trans-dienoyl-CoA, indicating that it is a delta3,5-delta2,4-dienoyl-CoA isomerase. ECH1 functions in the

auxiliary step of the fatty acid beta-oxidation pathway. Expression of the rat gene is induced by peroxisome proliferators.

Reference

Kovalyov LI,et al.(2006) Polymorphism of delta3,5-delta2,4-dienoyl-coenzyme A isomerase (the ECH1 gene product protein) in human striated muscle tissue. Biochemistry Mosc. 71(4): 448-53.

Olsen JV,et al.(2006) Global, in vivo, and site-specific phosphorylation dynamics in signaling networks. Cell. 127 (3):635-48.

FitzPatrick DR,et al.(1995) Isolation and characterization of rat and human cDNAs encoding a novel putative peroxisomal enoyl-CoA hydratase. Genomics. 27(3):457-66.