Data Sheet (Cat.No.TMPY-03658)

TargetMol

ETHE1 Protein, Human, Recombinant (His)

General Information

Synonyms:	YF13H12;HSCO;ethylmalonic encephalopathy 1
Protein Construction:	A DNA sequence encoding the human ETHE1 (O95571) (Leu13-Ala254) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	O95571
Molecular Weight:	35.7 kDa (predicted); 28 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 PBS, pH 7.4. 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

ETHE1, also known as HSCO, is a sulfur dioxygenase that localizes within the mitochondrial matrix. ETHE1 probably plays an important role in metabolic homeostasis in mitochondria. It may also function as a nuclear-cytoplasmic shuttling protein that binds transcription factor RELA/NFKB3 in the nucleus and exports it to the cytoplasm. ETHE1 can suppresses p53-induced apoptosis by preventing nuclear localization of RELA. Mutations in ETHE1 gene result in ethylmalonic encephalopathy. Ethylmalonic encephalopathy is an autosomal recessive, invariably fatal disorder

characterized by early-onset encephalopathy, microangiopathy, chronic diarrhea, defective cytochrome c oxidase (COX) in muscle and brain, high concentrations of C4 and C5 acylcarnitines in blood and high excretion of ethylmalonic acid in urine.

Reference

Higashitsuji. et al., 2002, Cancer Cell. 2 (4): 335-46.
McCoy JG. et al., 2007, Acta Crystallogr D Biol Crystallogr. 62 (9): 964-70.
Mehrle A. et al., 2006, Nucleic Acids Res. 34: D415-8.