Data Sheet (Cat.No.TMPY-03791)

TargetMol

DPYS Protein, Human, Recombinant

General Information

Synonyms:	dihydropyrimidinase;DHPase;DHP
Protein Construction:	A DNA sequence encoding the human DPYS (NP_001376.1) (Met1-Pro519) was fused with two additional amino acids (Gly&Pro) at the N-terminus. Predicted N terminal: Gly
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q14117
Molecular Weight:	56.8 kDa (predicted); 54 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:	> 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 20 mM Tris, 500 mM NaCl, 3 mM DTT, 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

DPYS, also known as dihydropyrimidinase, belongs to the DHOase family, hydantoinase/dihydropyrimidinase subfamily. DPYS catalyzes the second step of the reductive pyrimidine degradation, the reversible hydrolytic ring opening of dihydropyrimidines. It can catalyzes the ring opening of 5,6-dihydrouracil to N-carbamyl-alanine and of 5,6-dihydrothymine to N-carbamyl-amino isobutyrate. DPYS is expressed at a high level in liver and kidney as a major 2.5-kb transcript and a minor 3.8-kb transcript. Defects in the DPYS gene are linked to dihydropyrimidinuria.

Reference

Thomas HR. et al., 2008, Genomics. 18 (1): 25-35.
Thomas HR. et al., 2008, Pharmacogenet Genomics. 17 (11): 973-87.
Van Kuilenburg AB. et al., 2007, Mol Genet Metab. 91 (2): 157-64.

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