

DPYS Protein, Human (sf9, His-GST)

Cat. No.:	HY-P75714
Synonyms:	Dihydropyrimidinase; DHP; DHPase; Hydantoinase; DPYS
Species:	Human
Source:	Sf9 insect cells
Accession:	Q14117 (M1-P519)
Gene ID:	1807
Molecular Weight:	Approximately 69 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris, 500 mM NaCl, 3 mM DTT, 10% Glycerol, pH 8.0. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Dihydropyrimidinase (DPYS) is an enzyme that plays a crucial role in the reductive pyrimidine degradation pathway, catalyzing the reversible hydrolytic ring opening of dihydropyrimidines. Specifically, DPYS can catalyze the ring opening of 5,6-dihydrouracil to N-carbamyl-alanine and 5,6-dihydrothymine to N-carbamyl-amino isobutyrate. This enzymatic activity is a key step in the catabolism of pyrimidine derivatives, contributing to the breakdown of nucleotide and nucleic acid metabolites. The versatility of DPYS in the hydrolytic ring opening of dihydropyrimidines highlights its significance in maintaining pyrimidine homeostasis and the recycling of pyrimidine-related compounds within the cell. Understanding the functions of DPYS provides insights into the regulation of pyrimidine metabolism and its implications for cellular processes.
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Caution: Product has not been fully validated for medical applications. For research use only.

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