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Histidyl-tRNA Synthetase Human Recombinant ENZYME

Catalog Number: PRP-268ENZ
Quantity: 10 micrograms, 50 micrograms, 1 milligram
Format: Sterile-filtered clear solution
Host: *E. coli*

Background:

Aminoacyl-tRNA synthetases are a class of enzymes that charge tRNAs with their cognate amino acids. The protein encoded by this gene is a cytoplasmic enzyme which belongs to the class II family of aminoacyl-tRNA synthetases. The enzyme is responsible for the synthesis of histidyl-transfer RNA, which is essential for the incorporation of histidine into proteins. The gene is located in a head-to-head orientation with HARSL on chromosome five, where the homologous genes share a bidirectional promoter. The gene product is a frequent target of autoantibodies in the human autoimmune disease polymyositis/dermatomyositis.

Specificity and Preparation:

Histidyl-tRNA synthetase human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain having a molecular mass of 55 kDa. The histidyl-tRNA synthetase is purified by a proprietary chromatographic technique. Purity is greater than 90.0% as determined by both RP-HPLC and SDS-PAGE. The protein solution contains 150 mM NaCl and 10 mM sodium phosphate containing 0.1% NaN₃ (pH 7.2). Protein quantitation was carried out by using 0.25 - 2.0 mg/ml Bradford assay vs. BSA.

Usage and Storage:

Reported to be effective for immunoblotting (western blot, strongly reactive with human anti-histidyl-tRNA synthetase antisera). Although stable at 4°C for 3 weeks, material should be stored desiccated below -18°C. Avoid repeated freezing and thawing. Gently spin down material before use; 5-10 seconds in a microfuge should be adequate.

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