Creative Enzymes®

Native Baker's yeast (S. cerevisiae) Enolase

Cat. No. NATE-0223

Lot. No. (See product label)

Introduction

Description Enolase is a metalloenzyme that catalyzes the interconversion of 2-phosphoglycerate to phosphoenolpyruvate. Enolase is essential for both glycolysis and gluconeogenesis. Enolase from baker's yeast is a homodimer containing two bound Mg2+ ions. The molecular weight is 93.069 kDa.The peptide consists of 436 amino acids and contains a single cysteine residue. Two of the active site components include His191 and Arg414. The phosphorylated tyrosine residue present in yeast enolase forms a substrate for phosphorylation by tyrosine protein kinase. Apart from Mg2+, the enzyme can be activated by Zn2+, Mn2+, and Cd2+.

Applications Enolase from baker´s yeast has been used in a study to investigate the contribution of the antibodies response induced by a low virulent Candida albicans strain in protection against systemic candidiasis. Enolase from baker´s yeast has also been used in a study to investigate the role of metal ions in catalysis by enolase. The enzyme from Creative Enzymes has been used as an antigen during ELISA. the study used human granul ocyte proteins to identify and characterize autoantibodies against catalase and α-enolase in patients with primary sclerosing cholangitis. It has been used to study temperature-and denaturant-induced yeast enolase denaturation using fourier transform infrared spectroscopy. It has also been used along with other proteins to study gradient chromatof ocusing-mass spectrometry; a new technique for protein analysis.

Synonyms EC 4.2.1.11; enolase; 2-phosphoglyceRate dehydRatase; 14-3-2-protein; nervous-system specific enolase; phosphoenolpyruvate hydRatase; 2-phosphoglyceRate dehydRatase; 2-phosphoglyceric dehydRatase; 2-phosphoglyceRate enolase; γ-enolase; 2-phospho-D-glyceRate hydro-lyase; 9014-08-8

Product Information

Source Baker's yeast (S. cerevisiae)

Form Lyophilized powder containing Tris buffer salts

EC Number EC 4.2.1.11

CAS No. 9014-08-8

Activity > 50 units/mg protein

Buffer 15 mM Tris HCl, pH 7.4: soluble 1.0 mg/mL, clear

Unit Definition One unit will convert 1.0 µmole of 2-phosphoglycerate to phospho (enol)pyruvate per min at pH 7.4 at 25°C.

Storage and Shipping Information

Storage −20°C