

## 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<br/>response induced by a low virulent Candida albicans strain in protection against systemic candidiasis.<br/>Enolase from baker's yeast has also been used in a study to investigate the role of metal ions in catalysis<br/>by enolase. The enzyme from Creative Enzymes has been used as an antigen during ELISA. the study<br/>used human granul ocyte proteins to identify and characterize autoantibodies against catalase and  $\alpha$ -<br/>enolase in patients with primary sclerosing cholangitis. It has been used to study temperature-and<br/>denaturant-induced yeast enolase denaturation using fourier transform infrared spectroscopy. It has also<br/>been used along with other proteins to study gradient chromatof ocusing-mass spectrometry; a new<br/>technique for protein analysis.
- SynonymsEC 4.2.1.11; enolase; 2-phosphoglyceRate dehydRatase; 14-3-2-protein; nervous-system specific<br/>enolase; phosphoenolpyruvate hydRatase; 2-phosphoglyceRate dehydRatase; 2-phosphoglyceric<br/>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 $\mu$ mole of 2-phosphoglycerate to phospho (enol)pyruvate per min at pH 7.4 at 25°C.

## Storage and Shipping Information

Storage –20°C