Creative Enzymes®

Native Rabbit Phosphorylase b

Cat. No. NATE-0563

Lot. No. (See product label)

Introduction

Description	Phosphorylase b is a non-active form and is present in resting muscle. Phosphorylase b kinase activity increases significantly when the Mg2+:ATP ratio exceeds. The breakdown of ATP during muscle contraction is thought to trigger in vivo conversion of phosphorylase b into a. Phosphorylase b is activated by inosine monophosphate.
Applications	Phosphorylase b is used to study the conversion mechanism of inactive phosphorylase b to active phosphorylase in muscle. Phosphorylase b is used to study which factors influence the conversion of phosphorylase b to phosphorylase a such as temperature, AMP, fluoride and detergents. It is used to study phosphorylase b deficiency mutations. The enzyme from Creative Enzymes has been used in the calibration of Sepharose C1-6B columns while studying the molecular weight of methylamine dehydrogenase subunits. It has been used in ion mobility-mass spectrometry studies of phosphorylase B ions that have been generated with supercharging reagents, in charge-reducing buffer. It has also been used for the preparation of p32 labeled phosphorylase A using phosphorylase kinase and [32P]ATP.
Synonyms	Phosphorylase b; EC 2.4.1.1; 9012-69-5; muscle phosphorylase a and b; amylophosphorylase; polyphosphorylase; amylopectin phosphorylase; glucan phosphorylase; α-glucan phosphorylase; 1,4-α-glucan phosphorylase; glucosan phosphorylase; granulose phosphorylase; maltodextrin phosphorylase; muscle phosphorylase; myophosphorylase; potato phosphorylase; starch phosphorylase; 1,4-α-D-glucan:phosphate α-D-glucosyltransferase; phosphorylase (ambiguous)

Product Information

Species	Rabbit
Source	Rabbit muscle
Form	Type I, Lyophilized powder containing lactose, 5′-AMP, and Mg (OAc)2 (10 µmole per 100 mg protein); Type II, lyophilized powder, light yellow.
EC Number	EC 2.4.1.1
CAS No.	9012-69-5
Molecular Weight	mol wt 97.2 kDa by calculation
Purity	2× crystallization
Activity	Type I, > 20 units/mg protein; Type II, > 7 units/mg.
Contaminants	~0.01 µmol/mg protein 5′-AMP (This low level will not interfere with phosphorylase and phosphorylase kinase assays.)
Unit Definition	One unit will form 1.0 µmole of α-D-glucose 1-phosphate from glycogen and orthophosphate in the presence of 5'-AMP, per min at pH 6.8 at 30°C measured in a system containing phosphoglucomutase, NADP, and glucose 6-phosphate dehydrogenase. (One µmolar unit is equivalent to approx. 45 Cori units.)

Storage and Shipping Information

Storage	−20°C