

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 Mg^{2+} :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 $[^{32}P]ATP$.

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 μ mole 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 $\times$ crystallization

Activity

Type I, > 20 units/mg protein; Type II, > 7 units/mg.

Contaminants

~0.01 μ mol/mg protein 5'-AMP (This low level will not interfere with phosphorylase and phosphorylase kinase assays.)

Unit Definition

One unit will form 1.0 μ mole of α -D-glucose 1-phosphate from glycogen and

One Definition

One unit will form 1 μ mole 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 μ molar unit is equivalent to approx. 45 Cori units.)

Storage and Shipping Information

Storage	−20°C
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