

Phosphogluconate dehydrogenase from Human, Recombinant

Cat. No. NATE-1652

Lot. No. (See product label)

Introduction

Description

In enzymology, a phosphogluconate dehydrogenase (decarboxylating) (EC 1.1.1.44) is an enzyme that catalyzes the chemical reaction: 6-phospho-D-gluconate + NADP⁺ ⇌ D-ribulose 5-phosphate + CO₂ + NADPH. Thus, the two substrates of this enzyme are 6-phospho-D-gluconate and NADP⁺, whereas its 3 products are D-ribulose 5-phosphate, CO₂, and NADPH. This enzyme belongs to the family of oxidoreductases, specifically those acting on the CH-OH group of donor with NAD⁺ or NADP⁺ as acceptor.

Synonyms

6-Phosphogluconic Dehydrogenase; phosphogluconic acid dehydrogenase; 6-phosphogluconic carboxylase; 6-phosphogluconate dehydrogenase (decarboxylating); 6-phospho-D-gluconate dehydrogenase; EC 1.1.1.44; phosphogluconate dehydrogenase; decarboxylating

Product Information

Species

Human

Source

E. coli

Form

Liquid

Formulation

1 mg/ml solution in 20 mM MES 6.0, 0.1 mM PMSF, 2 mM EDTA and 10% glycerol.

EC Number

EC 1.1.1.44

Molecular Weight

53.3 kDa

Purity

> 90% by SDS-PAGE

Activity

>10 units/mg

Concentration

1 mg/ml

Unit Definition

One unit oxidize 1.0 umole of 6-phospho-D-gluconate to D-ribulose 5-phosphate per minute at pH 8.0 at 25°C, in the presence of β-NADP.

Storage and Shipping Information

Storage

Store at +4°C for short term (1-2 weeks). For long term storage, aliquot and store at -70°C. Avoid repeated freeze/thaw cycles.