

## Native 6-phospho-D-gluconate dehydrogenase from E. coli

Cat. No. NATE-1167

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<sup>+</sup> ↔ D-ribulose 5-phosphate + CO<sub>2</sub> + NADPH. Thus, the two substrates of this enzyme are 6-phospho-D-gluconate and NADP<sup>+</sup>, whereas its 3 products are D-ribulose 5-phosphate, CO<sub>2</sub>, and NADPH. This enzyme belongs to the family of oxidoreductases, specifically those acting on the CH-OH group of donor with NAD<sup>+</sup> or NADP<sup>+</sup> as acceptor.

#### Applications

Determination of D-Gluconate and D-Glucono-δ-lactone in foodstuffs.

#### Synonyms

6-Phosphogluconic Dehydrogenase; phosphogluconic acid dehydrogenase; 6-phosphogluconic dehydrogenase; 6-phosphogluconic carboxylase; 6-phosphogluconate dehydrogenase (decarboxylating); 6-phospho-D-gluconate dehydrogenase; EC 1.1.1.44; phosphogluconate dehydrogenase; decarboxylating; 9073-95-4

### Product Information

#### Source

E. coli

#### Form

Suspension in Ammonium Sulphate

#### EC Number

EC 1.1.1.44

#### CAS No.

9073-95-4

#### Activity

> 150 U/ml, > 45 U/mg

#### Optimum pH

7.5

#### Optimum temperature

55 °C

#### Unit Definition

One Units of 6-phospho-D-gluconate dehydrogenase is defined as the amount of enzyme required to produce one μmole of NADPH from NADP<sup>+</sup> in a coupled assay with gluconate kinase.

### Storage and Shipping Information

#### Storage

4°C