Creative Enzymes®

# 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+↔ 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.

***Applications*** Determination of D-Gluconate and D-Glucono-δ-lactone in foodstaffs.

***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 UI/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+ in a coupled assay with gluconate kinase.

## Storage and Shipping Information

***Storage*** 4°C