

Maltose Phosphorylase from E. coli, Recombinant

Cat. No. NATE-1250

Lot. No. (See product label)

Introduction

Description Maltose phosphorylase (MP) is a dimeric enzyme that catalyzes maltose and inorganic phosphate into β -D-glucose-1-phosphate and glucose.

Synonyms maltose phosphorylase; maltose:phosphate 1- β -D-glucosyltransferase; EC 2.4.1.8; 9030-19-7; MP

Product Information

Species E. coli

Source E. coli

Appearance White lyophilizate

EC Number EC 2.4.1.8

CAS No. 9030-19-7

Molecular Weight ca. 220 kDa

Activity > 10 U/mg lyophilizate

Contaminants α -amylase < $5.0 \times 10^{-3}\%$ α -glucosidase < $5.0 \times 10^{-2}\%$ NADPH oxidase < $5.0 \times 10^{-2}\%$

pH Stability 5.5–8.0

Optimum pH 6.5–7.5

Thermal stability below 55°C

Optimum temperature 45–50°C

Michaelis Constant 1.9×10^{-3} M (maltose) 3.4×10^{-3} M (phosphate) 8.3×10^{-3} M (arsenate)

Structure 2 subunits of 90 kDa (SDS-PAGE)

Inhibitors Hg²⁺, Ag⁺, Zn²⁺, Cu²⁺

Stabilizers Lactose

Unit Definition One unit (U) is defined as the amount of enzyme which produces 1 μ mol of D-glucose per min at 30°C and pH 7.0.

Storage and Shipping Information

Storage at -20°C

Stability Stability (liquid form) stable at 37°C for at least one week Stability (powder form) stable at 30°C for at least four weeks