

α -Glucosidase

recombinant α -Glucosidase EC 3.2.1.20

from Bacteria

Reaction Equation

α -D-Glucoside + H₂O → Alcohol + α -D-Glucose

Specification

Specific Activity

U/mg protein > 40 units

Properties

pH stability : pH 5.0 - 10.0 (25°C, 1 week)

Thermal stability : ≤ 60°C (pH 7.0, 15 min)

Optimum pH : pH 6.5

Optimum temp. : 60°C

Km value : 9.8×10^{-4} mol/L (PNPG)

Molecular weight : 63 kDa (SDS-PAGE)

Assay Procedure

I Spectrophotometric Method

Wavelength : 400 nm, Light path length : 1 cm

Final volume : 4 mL, Temperature : 37°C

Total time : 15 min

Pipette the following reagents into a cuvette

1.0 mL K-phosphate buffer (0.1 mol/L, pH 7.0)

0.5 mL *p*-Nitrophenyl- α -D-glucopyranoside
(20 mmol/L)

incubation at 37°C for 5 min

0.5 mL α -Glucosidase (approx. 0.02 U/mL)

incubation for exactly 15 min at 37°C

2.0 mL Na₂CO₃ (0.2 mol/L)

II Calculation

$$\frac{\Delta A \cdot V \cdot D}{18.1 \cdot d \cdot v \cdot t} = \text{U/mL}$$

ΔA = The change in absorbance at 400 nm

V = Total volume of reaction mixture (4.0 mL)

D = Enzyme dilution factor

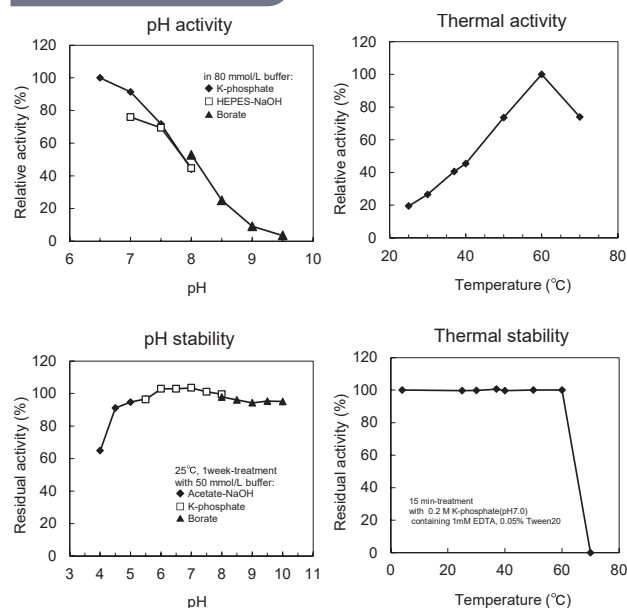
18.1 = mmol/L extinction coefficient of *p*-Nitrophenol
(L · mmol⁻¹ · cm⁻¹)

d = Light path length (1 cm)

v = Volume of enzyme sample (0.5 mL)

t = Reaction time (15 min)

Reference Data



Preparation and Storage

Lyophilized powder (Ammonium sulfate free)

Store below -20°C

Cat. No./Package

Cat. No. Package

46772900 Bulk

For in vitro diagnostic or research use only



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