rβ-Glucuronidase

β-D-Glucuronidase, recombinant from bacteria

β-D-Glucuronide glucuronosohydrolase (EC 3.2.1.31)

Host cell : E. coli

Reaction Equation

β-D-Glucuronide + H_2O
= D-Glucuronate + ROH (R : alkyl group)

Specification

	Specifications
Specific Activity	
IU/mg protein	>170 units
Contaminants	
Glucose-6-phosphate dehydrogenase ($NADP^+$)	<0.001%
Glucose-6-phosphate dehydrogenase (NAD^+)	<0.001%
NADPH oxidase	<0.001%
NADH oxidase	<0.001%
Alkaline Phosphatase	<0.001%

Profile

pH stability : pH 6.0 - 8.0 (11℃, 1 week)
Thermal stability : ≦55℃ (pH 6.5, 10 min)
Optimum pH : 7.5
Optimum temperature : ≧37℃
Km value : 0.22 mmol/L (ρ-Nitrophenyl-β-D-Glucuronide)
MW : 68 kD (SDS-PAGE)

Assay Procedure

Ⅰ. Spectrophotometric Method

Wavelength ; 405 nm, Light path length ; 1 cm,
Temperature ; 30℃

Pipette the following reagents into a cuvette

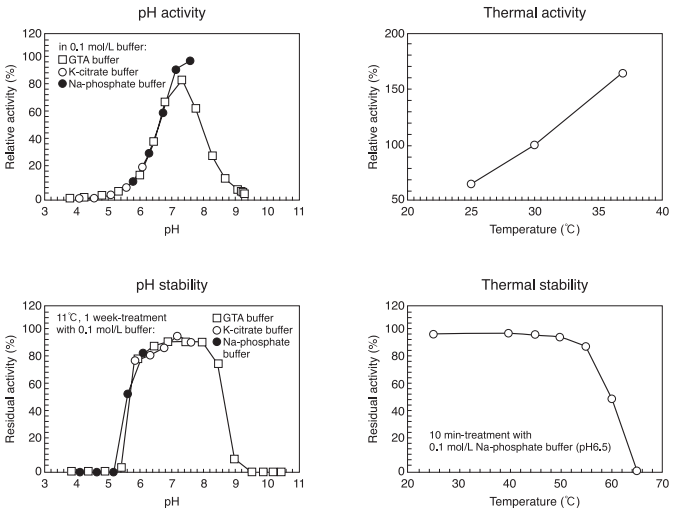
3.00 mL	Na-phosphate buffer (20 mmol/L, pH 7.1, 30℃) containing 2-Mercaptoethanol (0.1 mol/L), ρ-Nitrophenyl-β-D-Glucuronide (1 mmol/L)
0.02 mL	rβ-Glucuronidase (about 2 IU/mL)

Ⅱ. Calculation

$$\frac{\Delta A/\min \cdot V \cdot D}{9.6 \cdot d \cdot v} = IU/mL$$

ΔA/min = The change in absorbance at 405 nm/minute
V = Total volume of reaction mixture (3.02 mL)
D = Enzyme dilution factor
9.6 = mM extinction coefficient of ρ-Nitrophenol ($L \cdot mmol^{-1} \cdot cm^{-1}$)
d = Light path length (1 cm)
v = Volume of enzyme sample (0.02 mL)

Reference Data



Preparation and storage

50% Glycerol solution……below −20℃
IU per 1 ml solution is >1,000 units.

OYC No./Package

OYC No.	Package
46856005	300 units
46855005	1,000 units
46855905	Bulk

(Research reagent use only, not for medical use.)