

β-Galactosidase, Enzyme Activity

| Catalog | Unit |
|-------------|--------|
| TBP0018-1KU | 1000 U |
| TBP0018-5KU | 5000 U |

Preparation and Specification

Appearance: White amorphous powder, lyophilized.

Activity: GradeII 500U/mg-solid or more

Contaminants: α-galactosidase <1×10⁻⁴%

α-glucosidase <1×10⁻⁴%

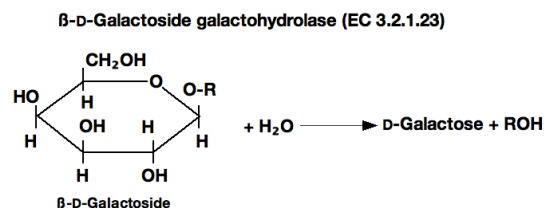
β-glucosidase <2×10⁻³%

α-mannosidase <1×10⁻⁴%

β-mannosidase <1×10⁻⁴%

proteinase <10mAbs/mg-P

Stabilizer: Mg⁺⁺



Properties

Stability: Stable at -20°C for at least One year

Molecular weight: 540,000

Isoelectric point: 4.6

Michaelis constants: 3.0×10⁻⁴M (o-Nitrophenyl-β-D-galactoside), 6.7×10⁻⁵M (p-Nitrophenyl-β-D-galactoside), 2.3×10⁻⁴M (Phenyl-β-D-galactoside), 2.5×10⁻³M (Lactose)

Structure: The enzyme is composed of four identical subunits having a molecular weight of ca.135,000. The amino acid analysis indicates approximately 1,170 residues per subunit. $E_{1\text{cm}}^{280\text{nm}} (1\%) = 20.9$

Inhibitors: p-Chloromercuribenzoate, Iodoacetamide, heavy metal ions (Zn⁺⁺, Fe⁺⁺⁺, Cd⁺⁺, Cu⁺⁺, Pb⁺⁺, Ag⁺, Hg⁺⁺), Ionic detergents (SDS, DAC, etc.)

Optimum pH: 7.0-7.5

Optimum temperature: 50-55°C

pH Stability: pH 6.5-8.5 (25°C, 20hr)

Thermal stability: below 50°C (pH 7.3, 15min)

Applications

This enzyme is useful for structural investigation of carbohydrates, the determination of lactose (foodstuff analysis) and as an enzyme label for enzyme immunoassay.

For research use only