

## β-Galactosidase from E. coli, Recombinant (EIA Grade)

Cat. No. NATE-0986

Lot. No. (See product label)

### Introduction

- Description** β-galactosidase, also called beta-gal or β-gal, is a hydrolase enzyme that catalyzes the hydrolysis of β-galactosides into monosaccharides. Substrates of different β-galactosidases include ganglioside GM1, lactosylceramides, lactose, and various glycoproteins.
- Applications** Marker enzyme for the manufacturing of antibody- and antigen-enzyme conjugates incorporated in immunoassays for colorimetric and fluorimetric detection.
- Synonyms** β-galactosidase; beta-gal; β-gal; lactase; β-lactosidase; maxilact; hydrolact; β-D-lactosidase; trilactase; β-D-galactanase; β-D-galactoside galactohydrolase; β-Galactosidase EIA Grade

### Product Information

- Source** E. coli
- Appearance** White lyophilizate, stabilized with phosphate buffer and sucrose.
- CAS No.** 9031-11-2
- Molecular Weight** 465 kDa
- Activity** > 700 U/mg protein
- Isoelectric point** 4.61
- pH Stability** 6
- Optimum pH** 8
- Thermal stability** Up to +37°C
- Michaelis Constant** Tris buffer, pH 7.6, +20°C / relation rate: 2-nitrophenyl-β-galactoside:  $9.50 \times 10^{-4}$  mol/l / 1.00 phenyl-β-D-galactoside:  $3.23 \times 10^{-3}$  mol/l / 0.05 lactose:  $3.85 \times 10^{-2}$  mol/l / 0.06 4-nitrophenyl-β-galactoside:  $4.45 \times 10^{-4}$  mol/l / ~0.50
- Structure** 4 identical subunits, β-galactosidase contains no carbohydrates
- Activators** Mg<sup>2+</sup> and Na<sup>+</sup> (or other monovalent cations) are essential for activity.

### Storage and Shipping Information

- Stability** At -15 to -25°C within specification range for 24 months. Store under nitrogen.