Creative Enzymes®

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 x 10-4 mol/l / 1.00 phenyl-β-D-galactoside: 3.23 x 10-3 mol/l / 0.05 lactose: 3.85 x 10-2 mol/l / 0.06 4-nitrophenyl-β-galactoside: 4.45 x 10-4 mol/l / ~0.50
Structure	4 identical subunits, β-galactosidase contains no carbohydrates
Activators	Mg2+ and Na+ (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.