

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: 9.50×10^{-4} mol/l / 1.00 phenyl-β-D-galactoside: 3.23×10^{-3} mol/l / 0.05 lactose: 3.85×10^{-2} mol/l / 0.06 4-nitrophenyl-β-galactoside: 4.45×10^{-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.