Creative Enzymes®

Native Bovine β-N-Acetylglucosaminidase

Cat. No. NATE-0779

Lot. No. (See product label)

Introduction

Description

This enzyme, sometimes called β-N-acetylhexosaminidase, is reported to liberate terminal β-linked N-acetylglucosamine and N-acetylgalactosamine from a variety of substrates. The activity of β-N-actylglucosaminidase may be determined with the chromogenic substrate p-nitrophenyl-N-acetyl-β-D-glucosaminide. β-N-actylglucosaminidase hydrolyzes the terminal nonreducing N-acetyl-D-hexosamine residues. This enzyme contains two predominant isozymes, Hex A, a heterodimer, and Hex B, a homodimer. N-acetylglucosamine, acetamide, N-2-acetamido-2-deoyglucosylamine, N-acetylnojirimycin, and N-acetyldeoxynojirmycin are known inhibitors.

Applications

Bovine kidney β-N-acetylglucosaminidase is a lysosomal enzyme used to hydrolyze N-acetyl-β-D-glucosaminides and N-acetyl-β-Dgalactosaminides. It is used in chemoenzymatic synthesis of oligosaccharides based on their effective transglycosylation of β-GlcNAc and β-GalNAcc. It may be a useful tool to study Alzheimer's Disease.

Synonyms

hexosaminidase; β-acetylaminodeoxyhexosidase; N-acetyl-β-D-hexosaminidase; N-acetyl-beta-hexosaminidase; β-hexosaminidase; β-acetylhexosaminidinase; β-D-N-acetylhexosaminidase; β-N-acetyl-D-hexosaminidase; β-N-acetylglucosaminidase; hexosaminidase A; N-acetylhexosaminidase; β-D-hexosaminidase; 9012-33-3; EC 3.2.1.52

Product Information

Species

Bovine

Source

Bovine kidney

Form

ammonium sulfate suspension. Suspension in 3.2 M (NH4)2SO4, pH approx. 6.0

EC Number

EC 3.2.1.52

CAS No.

9012-33-3

Activity

10-50 units/mg protein

Pathway

Other glycan degradation, organism-specific biosystem; Other glycan degradation, conserved biosystem

Unit Definition

One unit will hydrolyze 1.0 µmole of p-nitrophenyl N-acetyl-β-D-glucosaminide to p-nitrophenol and N-acetyl-D-glucosamine per min at the pH 4.25 at 25°C.

Storage and Shipping Information

Storage

2-8°C