CREATIVE BIOMART®
Assay Kit

?-N-Acetylglucosaminidase Colorimetric Activity Assay Kit

Product Information

Cat.No. Kit-2149

Product Overview

NAG Activity Assay Kit provides a simple and sensitive method for monitoring NAG enzymatic activity. In this assay, NAG uses a synthetic pnitrophenol derivative (R-pNP) as a NAG substrate and releases pNP which can be measured at absorbance (OD 400 nm). The assay can detect as low as 50 µU of NAG activity in a variety of samples.

Size

100 assays

Description

β-N-Acetylglucosaminidase (NAG, EC 3.2.1.52) is a lysosomal enzyme that is expressed in various tissues, including kidney, liver and lungs. NAG can cleave N-acetyl-glucosamine, a monosaccharide derivative of glucose. Its concentration in urine is minimal due to its inability to cross the glomerular basal membrane. Increased concentration of NAG in urine indicates renal tubular cell breakdown. Acute Kidney Injury (AKI) is the sudden loss of kidney functions, causing electrolyte imbalance, and retention of urea and other nitrogenous products. NAG has become one of the most studied and used biomarkers for the detection and diagnosis of AKI.

Applications

Measurement of NAG in biological samples from different mammalian species

Storage

Store kit at -20°C, protected from light. Briefly spin small vials prior to opening. Read entire protocol before performing the assay.NAG Assay Buffer: Bring to room temperature (RT) before use. Store at 4°C or -20°C.NAG Substrate: Light sensitive. Store at -20°C. Once opened, use within two months. Bring to RT before use. Mix well. If precipitation is observed, sonicate the contents in a water bath sonicator (interval: 2 min). Repeat if necessary.p-Nitrophenol (pNP): Light sensitive. Bring to RT before use. Store at -20°C. Once opened, use within two months.NAG Stop Solution: Bring to RT before use. Store at -20 °C. Once opened, use within two months.NAG Positive Control: Reconstitute with 40 µl

Tel: 1-631-559-9269 1-516-512-3133
Email:info@creative-biomart.org
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

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Kit Components

NAG Assay Buffer: 35 mlNAG Substrate: 6 mlp-Nitrophenol (pNP) (20 mM): 0.1 mlNAG Stop Solution: 3 mlNAG Positive Control: 1 vial

Detection method Absorbance (400 nm)

Compatible Sample Types

• Biological fluids such as urine, serum etc.• Tissues such as kidney, liver, brain etc.• Cells such as HeLa, HepG2, CHO etc.

Features & Benefits

• Convenient & sensitive• The assay can detect as low as 50 μU of NAG activity in a variety of samples

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