Creative Enzymes®

Sialic Acid Aldolase from Escherichia coli K12, Recombinant

Cat. No. NATE-0475

Lot. No. (See product label)

Introduction

Description	In enzymology, a N-acetylneuraminate lyase (EC 4.1.3.3) is an enzyme that catalyzes the chemical reaction:N-acetylneuraminate↔ N-acetyl-D-mannosamine + pyruvate. Hence, this enzyme has one substrate, N-acetylneuraminate, and two products, N-acetyl-D-mannosamine and pyruvate. This enzyme belongs to the family of lyases, specifically the oxo-acid-lyases, which cleave carbon-carbon bonds. This enzyme participates in aminosugars metabolism.
Applications	Sialic acid aldolase can be used to synthesize unnatural sugars of C (6) to C (10) for the design of antagonists and inhibitors of glycoenzymes.
Synonyms	EC 4.1.3.3; Sialic Acid Aldolase; N-Acetylneuraminate lyase; N-Acetylneuraminate pyruvate-lyase (N-acetyl-D-mannosamine-forming); N-acetylneuraminic acid aldolase; acetylneuraminate lyase; sialic aldolase; sialate lyase; N-acetylneuraminic aldolase; neuraminic aldolase; N-acetylneuraminate aldolase; neuraminic acid aldolase; N-acetylneuraminic acid aldolase; neuraminate aldolase; N-acetylneuraminic lyase; N-acetylneuraminic acid lyase; NPL; NALase; NANA lyase; acetylneuraminate pyruvate-lyase; N-acetylneuraminate pyruvate-lyase

Product Information

Species	Escherichia coli K12
Source	E. coli BL21
Form	Lyophilized powder containing Tris-HCl and NaCl
EC Number	EC 4.1.3.3
CAS No.	9027-60-5
Activity	> 3.0 units/mg protein
Unit Definition	One unit will catalyze the formation of 1.0 μmol Neu-5-Ac from Man-N-Ac and pyruvate per minute at 37°C at pH 8.0.

Storage and Shipping Information

Storage	−20°C