Creative Enzymes®

CMP-Sialic Acid Synthetase from Neisseria meningitidis group B, Recombinant

Cat. No. NATE-0023

Lot. No. (See product label)

Introduction

Description	In enzymology, a N-acylneuraminate cytidylyltransferase (EC 2.7.7.43) is an enzyme that catalyzes the chemical reaction:CTP + N-acylneuraminate↔ diphosphate + CMP-N-acylneuraminate. Thus, the two substrates of this enzyme are CTP and N-acylneuraminate, whereas its two products are diphosphate and CMP-N-acylneuraminate. This enzyme belongs to the family of transferases, specifically those transferring phosphorus-containing nucleotide groups (nucleotidyltransferases). This enzyme participates in aminosugars metabolism.
Applications	The enzyme has been utilized to synthesize CMP-sialic acid and its derivatives.
Synonyms	EC 2.7.7.43; N-acylneuraminate cytidylyltransferase; CMP-sialate pyrophosphorylase; CMP-sialate synthase; cytidine 5'-monophosphosialic acid synthetase; CMP-Neu5Ac synthetase; CMP-NeuAc synthetase; acylneuraminate cytidyltransferase; CMP-N-acetylneuraminate synthetase; CMP-N-acetylneuraminate synthase; CMP-N-acetylneuraminic acid synthase; CMP-NANA synthetase; CMP-sialate synthetase; CMP-sialic synthetase; cytidine 5'-monophospho-N-acetylneuraminic acid synthetase; cytidine 5-monophosphate N-acetylneuraminic acid synthetase; cytidine monophosphosialic acid synthetase; cytidine monophosphoacetylneuraminic synthetase; cytidine monophosphosialate pyrophosphorylase; cytidine monophosphosialate synthetase; acetylneuraminate cytidylyltransferase

Product Information

Species	Neisseria meningitidis group B
Source	E. coli BL21
Form	, Supplied as a lyophilized powder containing Tris-HCl and NaCl.
EC Number	EC 2.7.7.43
CAS No.	9067-82-7
Activity	> 10 units/mg protein
Unit Definition	One unit will catalyze the formation of 1 μmol CMP-Neu-5-Ac from Neu-5-Ac and CTP per minute at 37°C at pH 8.0.

Storage and Shipping Information

Storage	−20°C