

## 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 cytidyltransferase (EC 2.7.7.43) is an enzyme that catalyzes the chemical reaction: CTP + N-acylneuraminate  $\rightleftharpoons$  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 cytidyltransferase; 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 cytidyltransferase

### 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  $\mu$ mol 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