

N-Acetylneuraminic acid aldolase, Enzyme Activity

Catalog	Unit
TBP0046-25U	25 U
TBP0046-50U	50 U
TBP0046-100U	100 U

Preparation and Specification

Appearance: Yellowish amorphous powder, lyophilized

Activity: 10U/mg

Contaminants: Catalase $\leq 1.0\%$

NADH oxidase $\leq 1.0 \times 10^{-3}\%$

Stabilizers: Mannitol, EDTA

N-Acetylneuraminate pyruvate-lyase(EC 4.1.3.3)^{1 ~4)}

N-Acetylneuraminate \rightleftharpoons N-Acetyl-D-mannosamine + Pyruvate

Properties

Stability: Stable at -20°C for at least One year

Molecular weight: approx. 98,000

Isoelectric point: 4.6 ± 0.1

Michaelis constant: $2.5 \times 10^{-3}\text{M}$ (N-Acetylneuraminic acid)

Structure: 3 subunits (approx. 35,000) per enzyme molecule

Inhibitors: p-Chloromercuribenzoate, SDS, Hg^{++} , Ag^{+}

Optimum pH: 7.5-8.0

Optimum temperature: 70°C

pH Stability: pH 6.0–9.0 (10°C , 25hr)

Thermal stability: below 65°C (pH 7.5, 30min)

Applications

This enzyme is useful for enzymatic determination of N-acetylneuraminic acid and sialic acid when coupled with the related enzymes in clinical analysis. For industrial use, this enzyme is useful for enzymatic synthesis of sialic acid.

For research use only