

N-Acetylneuraminic acid aldolase, Enzyme Activity

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

Preparation and Specification

Appearance: Yellowish amorphous powder, lyophilized

Activity: Grade III 15U/mg-solid or more (30U/mg-protein or more) (containing approx. 30% of stabilizers)

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. ⁵⁻⁷⁾ For industrial use, this enzyme is useful for enzymatic synthesis of sialic acid.

For research use only