N-Acetylneuraminic Acid Aldolase from Microorganism

NAL-301

SPECIFICATIONS

Product name:	N-Acetylneuraminate pyruvate-lyase
EC	4.1.3.3
Appearance	Yellowish amorphous powder, lyophilized
Activity	Grade III, 15 U/mg-solid or more (contains approx. 30% stabilizers)
Contaminants	Catalase : ≤ 1.0%, NADH oxidase : ≤ 1.0×10^{-3}%
Stabilizers	Mannitol, EDTA
Stability	Stable at - 20°C for at least 12 months
Molecular weight	approx. 98,000
Isoelectric point	4.6 ± 0.1
Michaelis constant	2.5×10^{-3} M (*N*-Acetylneuraminic acid)
Structure	3 subunits per mol of enzyme
Inhibitors	p-Chloromercuribenzoate, sodium dodecyl sulfate, 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)

ENZYMES

BY

SORACHIM

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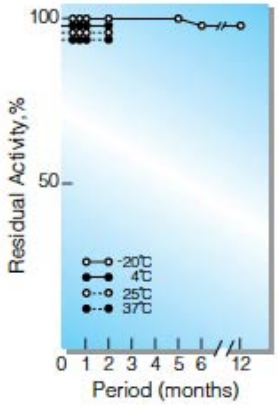

Fig.1. Stability (Powder form)

(kept under dry conditions)

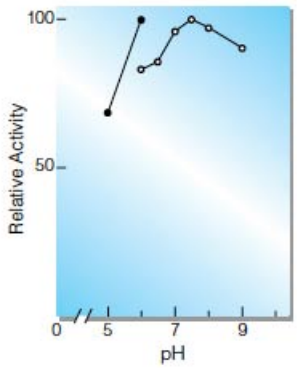

Fig.2. pH-Activity

(37℃, 5min-reaction in 50mM buffer solution : pH5.0-6.0, acetate; pH6.0-9.0, K-phosphate;
The enzyme activity was assayed by the 2.4-dinitrophenyl-hydradine method.)

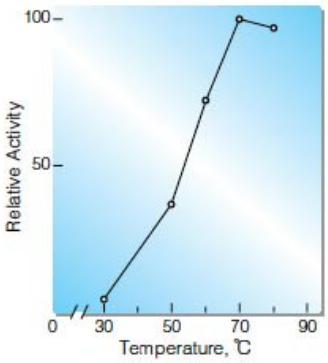

Fig.3. Temperature activity

(5min-reaction in 50mM K-phosphate buffer pH7.5, The enzyme activity was assayed by the 2.4-dinitrophenyl-hydradine method.)

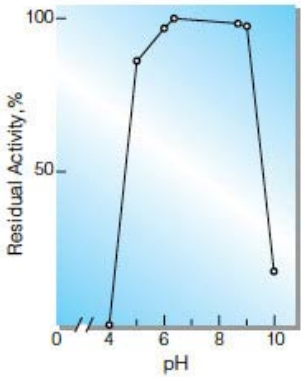

Fig.4. pH-Stability

(10℃, 25hr-treatment with 50mM buffer solution : pH4.0-6.0, acetate; pH6.0-9.0, K-phosphate ; pH9.0-10.0, borate.)

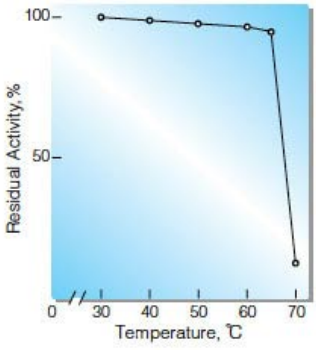

Fig.5. Thermal stability

(30min-treatment with 50mM K-phosphate buffer, pH7.5, enzyme concentration.: 20U/ml)