

## Native Microorganism N-Acetylneuraminic acid aldolase

### Product Information

<b>Cat#</b>	DIA-182
<b>Similar</b>	NALase
<b>Source</b>	Microorganism
<b>Description</b>	In enzymology, a N-acetylneuraminate lyase (EC 4.1.3.3) is an enzyme that catalyzes the chemical reaction: N-acetylneuraminate $\leftrightarrow$ N-acetyl-D-mannosamine + pyruvate. Hence, this enzyme has one substrate, N-acetylneuraminate, and two products, N-acetyl-D-mannosamine and pyruvate. This enzyme belongs to the family of lyases, specifically the oxo-acid-lyases, which cleave carbon-carbon bonds.
<b>Form</b>	Freeze dried powder
<b>Activity</b>	Grade III 15U/mg-solid or more (30U/mg-protein or more), (containing approx. 30% of stabilizers)
<b>CAS No.</b>	9027-60-5
<b>Isoelectric point</b>	4.6 $\pm$ 0.1
<b>Synonyms</b>	N-Acetylneuraminate Pyruvate Lyase; N-Acetylneuraminic Acid Lyase; NANA Aldolase; EC 4.1.3.3; N-acetylneuraminate pyruvate-lyase (N-acetyl-D-mannosamine-forming); N-acetylneuraminic acid aldolase; acetylneuraminate lyase; sialic aldolase; sialic acid aldolase; sialate lyase; N-acetylneuraminic aldolase; neuraminic aldolase; N-acetylneuraminate aldolase; neuraminic acid aldolase; N-acetylneuraminic acid aldolase; neuraminate aldolase; N-acetylneuraminic lyase; NPL; NALase; NANA lyase; acetylneuraminate pyruvate-lyase; N-acetylneuraminate pyruvate-lyase
<b>Enzyme Commission Number</b>	EC 4.1.3.3
<b>pH Stability</b>	pH 6.0–9.0 (10°C, 25hr)
<b>Michaelis Constant</b>	2.5 $\times$ 10 <sup>-3</sup> M (N-Acetylneuraminic acid)

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<b>Optimum pH</b>	7.5-8.0
<b>Optimum temperature</b>	70°C
<b>Thermal stability</b>	below 65°C (pH 7.5, 30min)
<b>Stability</b>	Stable at -20°C for at least 6 months
<b>Inhibitors</b>	p-Chloromercuribenzoate, sodium dodecyl sulfate, Hg <sup>++</sup> , Ag <sup>+</sup>
<b>Contaminants</b>	Catalase < 1.0%, NADH oxidase < 1.0x10 <sup>-3</sup> %
<b>Abbr</b>	NALase (Microorganism)
<b>Alias</b>	NPL; NALase; NANA lyase
<b>Applications</b>	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.
<b>Appearance</b>	Yellowish amorphous powder, lyophilized
<b>Structure</b>	3 subunits (approx. 35,000) per mol of enzyme
<b>Molecular Weight</b>	approx. 98 kDa