



## Native Escherichia coli N-Acetylneuraminic Acid Aldolase

### Product Information

<b>Cat#</b>	NATE-0490
<b>Similar</b>	NALase
<b>Source</b>	Escherichia coli
<b>Description</b>	In enzymology, a N-acetylneuraminic acid aldolase (EC 4.1.3.3) is an enzyme that catalyzes the chemical reaction: N-acetylneuraminic acid $\leftrightarrow$ N-acetyl-D-mannosamine + pyruvate. Hence, this enzyme has one substrate, N-acetylneuraminic acid, 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. This enzyme participates in aminosugars metabolism.
<b>Form</b>	Lyophilized powder containing potassium phosphate buffer salt
<b>Activity</b>	> 20 units/mg protein (biuret)
<b>CAS No.</b>	9027-60-5
<b>Isoelectric point</b>	4.6 $\pm$ 0.1
<b>Unit Definition</b>	One unit will release 1.0 $\mu$ mole of pyruvate from NANA per min at pH 7.7 at 37°C.
<b>Storage</b>	-20°C
<b>Synonyms</b>	N-acetylneuraminic acid aldolase; acetylneuraminic acid aldolase; sialic acid aldolase; sialate lyase; N-acetylneuraminic aldolase; neuraminic acid aldolase; N-acetylneuraminic acid aldolase; neuraminic acid aldolase; N-acetylneuraminic acid aldolase; neuraminic acid aldolase; N-acetylneuraminic lyase; N-acetylneuraminic acid aldolase; neuraminic acid aldolase; N-acetylneuraminic lyase; N-acetylneuraminic acid aldolase; NPL; NALase; NANA lyase; acetylneuraminic acid pyruvate-lyase; N-acetylneuraminic acid pyruvate-lyase; 9027-60-5; EC 4.1.3.3
<b>Enzyme Commission Number</b>	EC 4.1.3.3
<b>pH Stability</b>	pH 6.0–9.0 (10°C, 25hr)



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## **Native Escherichia coli N-Acetylneuraminic Acid Aldolase**

<b>Michaelis Constant</b>	2.5 x 10 <sup>-3</sup> M (N-Acetylneuraminic acid)
<b>Optimum pH</b>	7.5– 8.0
<b>Optimum temperature</b>	70°C
<b>Thermal stability</b>	Below 65°C (pH 7.5, 30 min)
<b>Inhibitors</b>	p-Chloromercuribenzoate, sodium dodecyl sulfact, Hg <sup>++</sup> , Ag <sup>+</sup>
<b>Abbr</b>	NPL, Native (Escherichia coli)
<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. Used in the Sialic Acid Quantification Kit, SIALIC-Q
<b>Structure</b>	3 subunits (approx. 35 kDa) per mol of enzyme
<b>Molecular Weight</b>	mol wt ~98 kDa