

Reagents Supplied

Components Name	Component number	Concentration	1,000 U
Endonuclease III (Nth)	RM20550	10,000 U/mL	100 μ L
10X Endonuclease III (Nth) Reaction Buffer	RM20828	10X	1.25 mL

Product Information

Endonuclease III (Nth) protein acts as both N-glycosylase and a AP-lyase. The N-glycosylase activity releases damaged pyrimidines from double-stranded DNA, generating a basic (AP site). The AP-lyase activity of the enzyme cleaves 3' to the AP site leaving a 5' phosphate and a 3' ring opened sugar.

Product Source

An E. coli strain which carries the cloned nth gene from Escherichia coli.

Storage Temperature

-20°C

Unit Definition

One unit is defined as the amount of enzyme required to cleave 1 pmol of a 34 mer oligonucleotide duplex containing a single AP site* in a total reaction volume of 10 μ l in 1 hour at 37°C in 1X Endonuclease III Reaction Buffer containing 10 pmol of fluorescently labeled oligonucleotide duplex.

* An AP site is created by treating 10 pmol of a 34 mer oligonucleotide duplex containing a single uracil residue with 1 unit of Uracil-DNA Glycosylase (UDG) for 2 minutes at 37°C.

Reaction Conditions

1X Endonuclease III (Nth) Reaction Buffer, Incubate at 37°C

1X Endonuclease III (Nth) Reaction Buffer

20 mM Tris-HCl, 1 mM EDTA, 1 mM DTT, pH 8 @ 25°C

Storage Buffer

10 mM Tris-HCl, 250 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 0.2 mg/mL Recombinant Albumin, 50% Glycerol, pH 7.4 @ 25°C

Heat Inactivation

65°C, 20min