Endonuclease VIII

Cat. No. : RK20534

Product Components

Components	Component Number	Concentration	1,000 U	5,000 U
Endonuclease VIII	RM20522	10,000 U/mL	100 μL	500 μL
10X Endo VIII Reaction Buffer	RM20129	10X	1.25 mL	2 × 1.25 mL

Product Description

Endonuclease VIII originates from *E.coli* and possesses both N-glycosylase and AP-endonuclease activity. The N-glycosylase activity releases damaged pyrimidines from double-stranded DNA, generating an apurinic (AP site). The AP-endonuclease the phosphodiester bond at the AP site, forming 3'-P and 5'-P ends. Damaged bases recognized and removed by Endonuclease VIII include: urea, 5, 6-dihydroxythymine, thymine glycol, 5-hydroxy-5-methylhyd antoin, uracil glycol, 6-hydroxy-5, 6-dihydrothymine and methylhydroxy-methyluracil.

Although Endonuclease VIII shares similar activity with Endonuclease III, it possesses β and δ lyase activity, whereas Endonuclease III has only β lyase activity.

It is applicable to:

- DNA damage repair
- Single cell gel electrophoresis (Comet assay).
- Alkaline elution
- Alkaline unwinding

Product Source

The gene for Endonuclease VIII from *E. coli* is expressed and purified from *E. coli*.

Unit Definition

One unit is defined as the amount of enzyme required to cleave 1 pmol of a nucleotide double-stranded substrate containing a single AP site* in a total reaction volume of 10 μL in 1 hour at 37°C.

** 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 Endo VIII Reaction Buffer, Incubate at 37°C

1X Endo VIII Reaction Buffer

10 mM Tris-HCl, 75 mM NaCl, 1 mM EDTA, pH 8 @ 25°C

Storage Temperature

-20°C

Storage Conditions

10 mM Tris-HCl, 250 mM NaCl, 0.1 mM EDTA, 50% Glycerol, pH 8.0 @ 25°C

Heat Inactivation

75°C for 10 min

QC Process

- Purity is > 95% detected by SDS-PAGE.
- No RNase contamination.
- No residual host genomic DNA detected by PCR.