While Endonuclease VIII is similar to Endonuclease III, Endonuclease VIII has β and δ lyase activity while Endonuclease III has β lyase activity.

Source: An E. coli strain which carries the cloned nei gene.

Applications:
- Single cell gel electrophoresis (Comet assay) (3,4,5)
- Alkaline elution (6)
- Alkaline unwinding (7)

Recommended Dilution for Comet Assay:
1:10^4 to 1:10^5 (3,4,5,8). A detailed protocol can be found at www.neb.com.

1X Endonuclease VIII Reaction Buffer:
10 mM Tris-HCl
75 mM NaCl
1 mM EDTA
pH 8.0 @ 25°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 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.

Recommended Dilution for Endonuclease VIII:
1:104 to 1:105 (3,4,5,8). A detailed protocol can be found at www.neb.com.
References: