

Product Description

FEN1 is a flap endonuclease derived from the FEN1 gene of *Thermococcus* 9°N. It recognizes and cleaves 5'-flap DNA in branched double-stranded DNA substrates, generating ligatable 5'-phosphate termini. The resulting products can be ligated by DNA ligase to form double-stranded DNA. In vivo, FEN1 is essential for Okazaki fragment maturation and also participates in base excision repair.

Components

Components	BR1G101-01 1,600 U	BR1G101-02 3,200 U
FEN1 (32 U/μL)	1 × 0.05 mL	1 × 0.1 mL
10× FEN1 Reaction Buffer	1 × 1 mL	1 × 1 mL

Unit Definition

One unit is defined as the amount of enzyme required to cleave 10 pmol of an oligonucleotide substrate containing a 5'-flap structure in a 10 μL reaction system at 65°C for 10 min.

Storage

Store at -20±5°C.

Notes

1. For research use only. Not for use in clinical diagnosis.
2. Mix thoroughly before use. Avoid repeated freeze-thaw cycles.
3. The volume of endonuclease added should not exceed one-tenth of the total reaction volume.
4. Suitable for cleavage of structure-specific DNA.
5. Prolonged incubation is not recommended, as overdigestion may lead to DNA deamination.

Prepare Reaction Mix

Prepare the reaction mix on ice as follows:

Components	Volume per Reaction	Concentration in Master Mix
10× FEN1 Reaction Buffer	2 μL	1×
FEN1 (32 U/μL)	1 μL	1.6 U/μL
Oligonucleotide with a 5'-flap structure	320 pmol	—
ddH ₂ O	To 20 μL	—

Reaction Programme

Incubate at 65°C for 15 min.