August 2023

Quick-Start Protocol

UDGase

UDGase (*Escherichia coli* Uracil DNA Glycosylase) (cat. nos. EN19-050 and EN19-250) catalyzes the hydrolysis of the N-glycosylic bond between uracil and sugar, leaving an apyrimidinic site in uracil-containing single-stranded or double-stranded DNA. The enzyme shows no activity on RNA or oligonucleotides. UDG should be shipped on dry ice. All components should be stored at –20°C in a freezer without a defrost cycle.

Further information

- Safety Data Sheets: **www.qiagen.com/safety**
- Technical assistance: **support.qiagen.com**

Notes before starting

- One unit is defined as the amount of enzyme that catalyzes the release of 60 pmol of uracil per minute from uracil-containing dsDNA. Activity is measured by release of [^{3}H]-uracil in a 50 µl reaction containing 0.2 µg DNA in 30 minutes at 37°C.
- Active over a broad pH range (optimum at pH 8.0).
- The enzyme can be irreversibly inactivated by incubation at 95°C for 10 minutes.

Procedure

For removing the dUTP-containing DNA template from the PCR reaction

1. Add 1 U of UDGase directly into the PCR reaction mixture (usually 1 µL of enzyme/ 20–25 µL reaction volume).
2. Incubate for 10–30 min at 37°C.
3. Inactivate UDG at 95°C for 10 min.
4. Continue to the next round of PCR/qPCR reaction.

Optional: For digesting dUTP-DNA in a separate reaction, dilute 1-5 uL of dUTP-containing DNA sample in 20 uL of 1xUDGase Reaction Buffer and add 1 U of UDGase.

Document Revision History

Date	Changes
08/2023	Initial release

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