Uracil-DNA Glycosylase (UDG)

WEB: www.abclonal.com

Catalog: RK20527
Size: 1,000 U / 5,000 U
Concentration: 5,000 U/ml
Components:

UDG	RM21505
10X UDG Reaction Buffer	RM20132

Product Description

E.coli Uracil-DNA Glycosylase (UDG) catalyzes the release of free uracil from uracil-containing DNA. UDG efficiently hydrolyzes uracil from single-stranded or double-stranded DNA, but not from oligomers (6 or fewer bases).
It releases uracil from ss- or ds-DNA and is applicable to eliminates PCR carry-over contamination.

Product Source:
An *E.coli* strain that carries the UDG gene from *E.coli*.

Unit Definition:
One unit is defined as the amount of enzyme that catalyzes the release of 60 pmol of uracil per minute from double-stranded, uracil-containing DNA. Activity is measured by release of [^{3}H]-uracil in a 50 µl reaction containing 0.2 µg DNA (10^4-10^5 cpm/µg) in 30 minutes at 37 ℃.

Reaction Conditions:
1X UDG Reaction Buffer, Incubate at 37 ℃

1X UDG Reaction Buffer:
20 mM Tris-HCl, 1 mM DTT, 1 mM EDTA, pH 8 @ 25 ℃

Storage Temperature: -20 ℃

Storage Conditions:
10 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.1 mg/ml BSA, 50% Glycerol, pH 7.4 @ 25 ℃

Heat Inactivation: No

Application Features:
Treatment of 0.1 µg of uracil-containing DNA with 1 unit of UDG for 10 minutes at 37 ℃ renders the DNA incapable of being copied by DNA polymerase. The enzyme can be 95% heat killed by incubation at 95 ℃ for 10 minutes. Since UDG remains partially active following heat treatment at 95 ℃, it is recommended that uracil glycosylase inhibitor be added to prevent degradation of product DNA. Alternatively, reaction products can be immediately extracted with phenol/chloroform.

Notes:
UDG is active over a broad pH range with an optimum at pH 8.0, does not require divalent cation, and is inhibited by high ionic strength (> 200 mM).

QC Process:
- Purity is above 95% detected by SDS-PAGE.
- No endonucleases, ss-DNase and other RNases contamination.
- No residual host genomic DNA detected by PCR .

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