Uracil DNA Glycosylase

Catalog #	Pack size	Price(€)
ZP00503	1000U(1U/ul)	192.00
ZP00504	2000U(1U/ul)	344.00

Description:

E. coli **Uracil DNA Glycosylase** (UNG) catalyses the release of free uracil from uracil-containing DNA. UNG efficiently hydrolyzes uracil from single-stranded or double-stranded DNA, but not from oligomers (6 or fewer bases).

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

Applications:

- Glycosylase mediated single nucleotide polymorphism detection (GMPD).
- Site-directed mutagenesis.
- As a probe for protein-DNA interaction studies.
- Rapid and efficientcloning of PCR products.
- Elimination carry-over contamination in PCR.

Quality Control:

Activity, SDS-PAGE (purity), 16-hour incubation, exonuclease and endonuclease activity.

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 in a total reaction volume of 50 µl in 30 minutes at 37°C in 1X Uracil DNA Glycosylase Reaction Buffer with 1 unit or uracil DNA Glycosylase and 0.2 µg [^{3}H]-uracil DNA (10^{4}-10^{5} cpm/µg).

10X UNG Reaction Buffer:200 mM Tris-HCl (pH8.0 at 25°C), 10 mM Dithiothreitol, 10 mM EDTA.

Concentration:1U/ul

Reaction Conditions:1X UNG Reaction Buffer, incubate at 37°C or 50°C.

Inhibition and Inactivation: Inactivated by heating at 95°C for 10 min. Enzyme activity is partially restored at temperatures lower than 55°C.

Storage Buffer and Concentration: UNG in 10 mM Tris-HCl (pH7.4 at 25°C), 50 mM KCl, 1 mM Dithiothreitol, 0.1 mM EDTA, 0.1 mg/ml BSA, 50% Glycerol.

Storage: Store at -20°C.

Note: UNG 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).
The abasic sites formed in DNA by UNG may be cleaved by heat, alkali-treatment or endonucleases that cleave specifically at abasic sites.

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