

Uracil DNA Glycosylase

PRODUCT INFORMATION

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*.

10X UNG Reaction Buffer

200 mM Tris-HCl, pH 8.0 (25°C), 10 mM Dithiothreitol, 10 mM EDTA.

Reaction Conditions

1X UNG Reaction Buffer, incubate at 37°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

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

Concentration

2 U/μl

Storage

This product can be stored at -20°C.

Quality Control

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

Applications

- Glycosylase mediated single nucleotide polymorphism detection (GMPD)
- Site-directed mutagenesis
- As a probe for protein-DNA interaction studies
- Rapid and efficient cloning of PCR products

Cat. No. E00011

Size: 2,000 U

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 of uracil DNA Glycosylase and 0.2 μg [3H]-uracil DNA (104-105 cpm/μg).

- Elimination carry-over contamination in PCR

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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