

Product Data Sheet

Cat # RP-1470

Uracil DNA Glycosilase

**Size:** 2000 IU

**Source:** *Escherichia Coli* strain that carries the *UNG* gene from *E.coli*. *E.Coli* Uracil DNA Glycosilase (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 fewer bases).

**Usage:**

This item is for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Applications and Suggested Dilutions:** 10mM Tris-HCl (pH-7.4 at 25°C), 50mM KCl, 1mM DTT, 0.1mM EDTA, 0.1 mg/ml BSA and 50% glycerol. Glycosilase mediated single nucleotide polymorphism detection (GMPD). Site-directed mutagenesis. As a probe for protein-DNA interaction studies. Rapid and efficient cloning of PCR products. Elimination carry-over contamination in PCR. 1 Unit is defined as the amount of UDG enzyme that catalyzes release of 60pmol of Uracil per minute from double-stranded, uracil-containing DNA in a total reaction volume of 50µl in 30 minutes at 37°C in 1X Uracil DNA Glycosilase Reaction Buffer with 1 Unit of Uracil DNA Glycosylase and 0.2µg [3H]-Uracil DNA ( $10^4$  -  $10^5$  cpm/µg). **10X UNG Reaction Buffer:** 200mM Tris-HCl (pH 8.0 at 25°C), 10mM DTT and 10mM EDTA. Users must optimize the appropriate concentration and conditions for each assay.

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**Storage and Stability:** Uracil DNA Glycosilase although stable at 15°C for 1 week, should be stored desiccated below -18°C. Please prevent freeze-thaw cycles. 1X UNG Reaction Buffer, incubate at 37°C. UNG is active over a broad pH range with an optimum at pH-8.0, doesn't require divalent cation, and is inhibited by high ionic strength (>200mM). The abasic sites formed in DNA by UNG may be cleaved by heat, alkali-treatment or endonucleases that cleave specifically at abasic sites. If supplied in powder then reconstitute it in 100 ul water for 1 mg/ml stock and store in liquid at 4°C for ~1 week or aliquots in suitable size and store at -20°C for long term storage.

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