Uracil-DNA Glycosylase (UDG)

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).

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

Supplied in: 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM dithiothreitol, 0.1 mg/ml BSA and 50% glycerol.

Application: Treatment of 0.1 µg of uracil-containing DNA with 1 unit of UDG for 10 minutes at 37°C renders the DNA incapable of being copied by DNA polymerase. The enzyme can be 95% heat killed by incubation at 95°C for 10 minutes. Since UDG remains partially active following heat treatment at 95°C, 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.

Reagents Supplied with Enzyme: 10X UDG Reaction Buffer.

Reagents Supplied with Enzyme: 1X UDG Reaction Buffer.

Endonuclease Activity: Incubation of 50 units of UDG with 1 µg of ϕX174 RF I DNA for 4 hours at 37°C in 50 µl reaction buffer resulted in <5% conversion to RF II.

Physical Purity: Purified to >95% homogeneity as determined by SDS-PAGE analysis using Coomassie Blue detection. BSA is added to the enzyme for stability.

Heat Inactivation: No

Notes On Use: 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).

References:

More Units

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