Uracil DNA Glycosylase (UDG)

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E. coli Uracil DNA Glycosylase (UDG) catalyzes the hydrolysis of the N-glycosylic bond between uracil and sugar, leaving an apyrimidinic site in uracil-containing single-stranded or double-stranded DNA. The enzyme shows no activity on RNA or oligonucleotides.

Features

- Active over a broad pH range (optimum at pH 8.0)
- Isolated from a recombinant source (*E. coli*)

Applications

- Helps to eliminate carry-over contamination in PCR
- As a probe for protein-DNA interaction studies
- Glycosylase mediated single nucleotide polymorphism detection (GMPD)
- For cloning of PCR products

Usage

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.

Heat Inactivation

The enzyme can be irreversibly inactivated by incubation at 95°C for 10 min.

10x UDG Reaction Buffer

250 mM Tris-HCl (pH 8.0), 1 mM EDTA, 10 mM DTT.

Quality control

The absence of DNases has been confirmed using the relevant procedures.

Unit definition

One unit is defined as the amount of enzyme that catalyzes the release of 60 pmol of uracil per minute from uracil-containing dsDNA. Activity is measured by release of [^{3}H]-uracil in a 50 µl reaction containing 0.2 µg DNA in 30 minutes at 37°C.

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Component	EN19-050 500 U	EN19-250 2500 U
UDG (1 U/µl)	500 µl	5 x 500 µl
10x UDG Reaction Buffer	1 ml	5 x 1 ml

Storage & shipping

Storage conditions
All components should be stored at -20°C in a freezer without a defrost cycle. When stored under optimum conditions, the reagents are stable until the expiry date.

Shipping conditions
Shipping on dry or blue ice.

For research use only

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