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Lab & Production Materials

Data Sheet

E.coli UDG

Product Number: UDGEC

Product Description

E.coli uracil-DNA glycosylase (UDG) is obtained from the expression and multi-step purification of the recombinant *E.coli* strain cloned with *E.coli* UDG gene. *E.coli* UDG catalyzes the release of uracil from uracil-containing DNA. UDG can efficiently hydrolyze uracil on single- or double-stranded DNA but cannot hydrolyze uracil from oligonucleotides of 6 bases or less.

Components

Components	UDGEC-500U	UDGEC-5000U
E.coli UDG (5 U/µl)	100 µl	1 mL

Storage Buffer

10 mM Tris-HCl, pH7.4@25°C
50mM KCl
0.1 mM EDTA
1 mM DTT
0.1mg/ml BSA
50% Glycerol (v/v)

Storage

Store at -30 ~ -15°C and transport at ≤ 0°C

Unit Definition

The amount of enzyme required to catalyze the release of 60 pmol of uracil from uracil-containing double-stranded DNA per minute is defined as 1 U. Activity was determined by measuring the amount of [^{3}H]-uracil released from a 50 µl reaction system containing 0.2 µg DNA within 30 min at 37°C.

Notes

For research use only. Not for use in diagnostic procedures.

Experiment Process

Reaction System	
ddH_2O	To 50 µl
10 x Taq Buffer (with 20 mM $MgCl_2$)	5 µl
dUTP[a]	0.6 mM
DATP/dCTP/dGTP	0.2 mM each
Template DNA	optional
Primer1 (10µM)	2 µl
Primer2 (10µM)	2 µl
Taq DNA Polymerase (5 U/µl)	0.5 µl
E. coli UDG (5 U/µl)[b]	0.2 µl

a) According to experimental needs, the final concentration of dUTP can be adjusted between 0.2 - 0.6mM.

b) According to experimental needs, the amount of 50 µl reaction system is generally 0.1 - 1 U.

▲ According to experimental needs, the final concentration of MgCl can be adjusted between 2 - 3 mM.

Reaction System			
37°C	10 min		Degradation of uracil-containing templates
95°C	2 min		UDG inactivation, template denaturation
PCR			
94°C	30 sec	}	30 - 35 cycles
55°C	30 sec		
72°C	60 sec/kb		
72°C	7 min		Fully extention

▲ According to the experimental needs, the PRC reaction program can be adjusted.

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