



Uracil-DNA Glycosylase (UNG), Heat-labile <Glycerol Free>

Code No. UNG-209 10,000 U × 1
Store at -20°C

[1] Introduction

Uracil-DNA Glycosylase (UNG) hydrolyzes the N-glycosylic bond between the deoxyribose sugar and the base in uracil-containing DNA leaving an apyrimidinic site in DNA. Since DNA with an apyrimidinic site is degraded by heat treatment, UNG can be used in combination with dUTP to prevent carry-over of amplified products derived from PCR.

This enzyme hydrolyzes uracil from both single- and double-stranded DNA containing dU, but it not from RNA. It can also be used to prevent carryover of RT-PCR.

[2] Components

Product name	Conc.	Package	Code No.	Storage
Uracil-DNA Glycosylase (UNG), Heat-labile <Glycerol Free>	≥ 40 U/μL	10,000 U × 1	UNG-209	-20°C

[3] Properties

(1) Unit definition

One unit of UNG is defined as the amount of enzyme required to release 1 nmol uracil from uracil-containing DNA per hour at 37°C*.

*Avoid freezing and thawing as much as possible. We have confirmed the stability of UNG up to 10 times of freezing and thawing.

(2) Heat inactivation

This enzyme is completely and irreversibly inactivated by incubation for 10 minutes at 50°C.

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[4] Source

Produced in *E. coli* (ung-) strain expressing a recombinant uracil DNA glycosylase gene of Atlantic cod (*Gadus morhua*) UNG.

[5] Buffer composition

Conc.	Component
20 mM	Tris-HCl, pH 7.5 (25°C)
50 mM	NaCl
1 mM	DTT
0.1% (v/v)	TritonX-100

[6] Usage example

Suitable amount of UNG is 1 U / 50 μ L of reaction volume. By incubating at room temperature (20-25°C) just prior to PCR reaction (RT reaction in RT-PCR), it is possible to eliminate carryover of uracil-containing amplified products. Since UNG is inactivated during PCR denaturation, there is no effect on the following reaction. Please change the amount of UNG as necessary.

[7] Related products

Product name	Package	Code No.
Uracil-DNA Glycosylase (UNG), Heat-labile	10,000 U \times 1	UNG-109
dUTP (100 mM)	0.5 mL \times 1	UTP-101
dNTPs Mixture (A, C, G, U each 2 mM)	1 mL \times 1	NTP-501
THUNDERBIRD™ Probe One-step qRT-PCR Kit	100 reactions	QRZ-101