



Manual

Cod UNG

Research use only.

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Cod UNG

1. Product description

Uracil N-glycosylase (UNG) from Atlantic cod (*Gadus morhua*) is a thermolabile enzyme that catalyses the hydrolytic removal of uracil bases from DNA. Cod UNG will efficiently hydrolyse uracil from single-stranded or double-stranded DNA molecules leaving an abasic site in the strand but not react with RNA. The enzyme can be added to standard qPCR, RT-qPCR, or RT-LAMP master mixes to prevent DNA carryover contamination from prior amplification reactions containing dUTP. Heating of reactions containing Cod UNG to ≥ 55 °C for 10 minutes irreversibly inactivates the enzyme and allows for new incorporation of dUTP into subsequent products without damage to newly synthesised DNA strands.

Unit Definition: One unit of enzyme catalyses the release of 60 pmol of uracil per minute from double-stranded, uracil-containing DNA. Activity is measured by a real-time fluorometric assay.

2. Concentration

Cod UNG: 1 U/ μ L

3. Storage and handling

Store at -20 °C upon arrival until provided expiration date. See individual component labels for additional storage recommendations. Minimise freeze/thaw cycles to avoid loss of performance.

4. Quick protocol

Add Cod UNG to achieve a final concentration of 0.1-0.05 U/ μ L per reaction.**

** Use 1 U/ μ L for one-step RT-PCR reactions use. Use 2 U/ μ L per reaction in the reverse transcription step of two-step RT-PCR reactions.

5. Recommended use conditions

The following general cycling conditions are recommended but can vary depending on the template and primers being use.

Cycling step	Temperature	Holding time	Cycles
Cod UNG incubation	25 °C	2 minutes	1
Reverse transcription	45-55 °C	15 minutes	1
Polymerase activation	95 °C	2 minutes	1
Melting	95 °C	10 seconds	40
Amplification***	60 °C	60 seconds	

Table 1: Recommended cycling conditions when using with a reverse transcriptase.

***Temperature and holding time will be based off primer set used.

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The following general cycling conditions are recommended but can vary depending on the template and primers being used.

Cycling step	Temperature	Holding time	Cycles
Cod UNG incubation	25 °C	2 minutes	1
Polymerase activation	95 °C	2 minutes	1
Melting	95 °C	10 seconds	40
Amplification***	60 °C	60 seconds	

Table 2: Recommended cycling conditions without a reverse transcriptase.

***Temperature and holding time will be based off primer set used.

6. Ordering information

Item number	Size
300CUNG-1	1,000 units
300CUNG-2	5,000 units

7. Further support

If you require any further support, please do not hesitate to contact our Technical Support Team:
techsupport@lgcgroup.com



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