Cod Uracil-DNA Glycosylase

Catalog No.: 4000

Expressed in: *E. coli*

Contents:

Cod Uracil-DNA Glycosylase is provided at a concentration of 50 U/µL

Background:

Cod Uracil-DNA Glycosylase (cUNG) is a recombinant, thermolabile enzyme that removes uracil from DNA. It is ideal for preventing carry over contamination during RNA or DNA amplification reactions that substitute dUTP for dTTP. cUNG is the only commercially available UDG enzyme that is completely and irreversibly inactivated by moderate heat treatment, unlike bacterial versions of the enzyme. Cod UDG treatment in combination with targeted pre-amplification using dUTP provides a simple and efficient solution to eliminate carry-over contamination and the generation of false positives and inaccurate quantification.

Features of this enzyme:

• Heat-labile, completely and irreversibly inactivated at 55 °C
• cUNG makes contamination control possible in PCR, LAMP and other amplification methods
• Does not degrade product post-PCR, enabling downstream use of the amplicon
• High purity enzyme, tested free of contaminating nucleases

Application Notes:

Thermolabile cUNG when used in combination with targeted pre-amplification using dUTP can eliminate carry-over contamination and the generation of false positives and inaccurate quantification for PCR- and LAMP-based amplification technologies.

*These products are intended for research use only, not for diagnostic use. The safety and efficacy of these products in diagnostic or other clinical uses has not been established.

Shipping and Storage:

cUNG is supplied in a buffer of 50% glycerol, 50 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 1 mM EDTA, 0.1% Tween-20, pH 7.5. *Can be supplied in a glycerol-free buffer as a custom order*.

cUNG is shipped on blue ice. On arrival store at -20 °C for optimum stability. Repeated freeze/thaw cycles should be avoided.

Quality Control

- cUNG activity: A known cUNG is used to create a standard curve with a real-time molecular beacon assay against which the activity of this enzyme is measured.
- Purity: >95% as determined by SDS-PAGE analysis

- cUNG is free of detectable RNase, DNase (exo- and endonuclease)
- <0.005 ng contaminating host DNA per Unit

PCR or LAMP amplification reactions with cUNG

- Prior to setting up PCR or LAMP reaction, thaw all reaction components.
- Setting up reaction on ice (4 °C) is highly recommended
- Ensure that you use dNTP mixes containing dUTP in your experiments.
- Add 1 U cUNG directly to your 30 µL LAMP or 20 µL PCR reaction
- Pre-incubate for 5 minutes at room temperature