

UCF.ME™ Uracil DNA Glycosylase (UDG/UNG), heat-labile, 1 U/μL

Product description

Heat-labile UDG (uracil DNA glycosylase) is expressed and purified from recombinant *E. coli* strains carrying the UDG gene from a psychrophilic marine bacterium through multiple steps of purification. Heat-Labile UDG catalyzes the release of free uracil from uracil-containing DNA by hydrolyzing the N-glycoside bond between uracil bases and sugar phosphate skeletons.

This product is sensitive to temperature, and can be completely inactivated by incubation at 55°C for 5 min or 50°C for 10 min. Compared with conventional UDG enzyme, heat-Labile UDG can avoid the degradation of dU-containing amplification products caused by residual activity of the inactivated UDG. In addition, this product has been processed by the UCF.ME™ ultra-low residue process, and its residual DNA contamination of *E. coli* is extremely low, which is suitable for the detection of pathogenic microorganisms and other fields.

Specifications

Source	Recombinant <i>E. coli</i> with UDG gene from psychrophilic marine bacteria
Storage Buffer	20 mM Tris-HCl, 100 mM KCl, 0.1mM EDTA, 1mM DTT, 0.5% Tween-20, 0.5% NP-40, 50% Glycerol, pH8.0 ± 0.2 @ 25°C
Unit Definition	One unit (U) is defined as the amount of enzyme that required to catalyze the hydrolysis of 1 μg dU-containing dsDNA in 30 minutes at 25°C
Heat Inactivation	55°C for 5 min; 50°C for 10 min

Components

Name	14466ES60	14466ES76	14466ES96
	100 U	500 U	10,000 U
UCF.ME™ Uracil DNA Glycosylase (UDG/UNG), heat-labile, 1 U/μL	100 μL	500 μL	10 mL

Storage

The product should be stored at -25~-15°C for 2 years.

Instructions

1. The recommended amount to add in a 20 μL system is 0.1-1 units (U), and the input quantity can be adjusted based on the actual results.
2. According to the demands of the experiment, the final concentration of dUTP can be adjusted between 0.2-0.6 mM, and 0.2 mM dTTP can be added selectively.
3. The reaction time at 25~37°C can be adjusted within 5~10 min according to the experimental require.

Notes

1. Heat-labile UDG is active in most PCR reaction buffers.
2. The enzyme should be stored in the ice box or ice bath when used, and should be stored at $-25\sim-15^{\circ}\text{C}$ immediately after use.
3. For your safety and health, please wear lab coats and disposable gloves for operation.
4. This product is scientific research purposes only.