

Manual

hUDG (human uracil DNA glycosylase)

Thermolabile enzyme for PCR mixtures to protect against contamination of PCR products. Concentration 1 U/ μ l.

catalog #	size
1026-200	200 U
1026-1000	1000 U

For research use only.

Guarantee

A&A Biotechnology provides guarantee on this product.

The company does not guarantee correct performance of this kit in the event of:

- not adhering to the supplied protocol
- use of not recommended equipment or materials
- use of other reagents than recommended or which are not a component of the product
- use of expired or improperly stored product or its components

Advantages

- removal of uracil from uracil-containing DNA.
- easy, irreversible thermal deactivation in the PCR environment.

Description

hUDG is a recombinant, thermolabile enzyme that is obtained by expression of an artificially synthesized gene encoding human uracil-DNA glycosylase. This enzyme catalyzes the hydrolysis of the N-glycosylic bond between uracil and sugar leaving an apyrimidinic site. The enzyme works on the uracil-containing single-stranded and double-stranded DNA.

Due to its thermolability (loss of total activity in 5 min at 55 °C) **hUDG** is easily deactivated, e.g. in the PCR environment. While commonly used, UNG glycosylase, derived from *E. coli* is not completely inactivated during PCR, which may lead to degradation of the resulting PCR products based on mixtures containing dUTP.

Applications

- protection from contamination by PCR products containing dU in real-time PCR or PCR.
- glycosylase mediated single nucleotide polymorphism detection.

Contents

	1026-200	1026-1000	storage
hUDG (1 U/μl)	200 U	5 x 200 U	-20 °C
storage buffer: 10 mM Tris-HCl, pH 8.0, 50 mM NaCl, 0.1 mM EDTA, 50% glycerol			
hUDG reaction buffer	500 μl	4 x 500 μl	-20 °C
10x hUDG reaction buffer: 200 mM Tris-HCl, pH 8.0, 10 mM EDTA, 100 mM NaCl			

Unit definition

Unit definition: One unit of enzyme catalyzes hydrolysis of 1 nanomole of uracil from uracil containing DNA in 60 min at 37 °C.

Protocol

In a PCR or real-time PCR reaction, it is recommended to use 0.1 U to 1 U unit of enzyme **hUDG** per reaction in 25 µl reaction volume.



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