DATA SHEET

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Uracil-DNA Glycosylase (UDG)

Prevention of carry-over contaminations
UNG, UDG

Cat. Nº.	Amount
■ ENZ-125S	100 units
□ ENZ-125M	200 units
□ ENZ-125L	1.000 units

Unit Definition: One unit of enzyme catalyzes the degradation of 1 µg single-stranded uracil-containing DNA at 37 °C in 60 min.

Storage Buffer
The enzyme is supplied in: 20 mM Tris-HCl (pH 8.0), 50 mM NaCl, 1 mM EDTA, 1 mM DTT, 50 µg/ml BSA and 50% (v/v) glycerol.

Concentration:
1 unit/µL

For *in vitro* use only!

Shelf Life:
12 months

Shipping:
Shipped on blue ice

Storage Conditions:
Store at -20 °C

Additional Storage Conditions:
Avoid freeze/thaw cycles.

Description:
Uracil-DNA-glycosilase (UDG), also known as UNG is an engineered E. coli enzyme that catalyses the release of uracil from single and double stranded uracyl-containing DNA . The resulting abasic sites are susceptible to hydrolytic cleavage at elevated temperatures. An amount of 0.1 units UDG can completely destroy up to 200 ng dU-containing DNA in 2 min at 50°C. It is used in real-time PCR to prevent carry-over contamination of dU-containing DNA from previous reactions.

This enzyme is designed to be more susceptible to high-temperature and inactivated easily during the dUTP containing real time -PCR.

Recommended assay:
Add 0.2 µl (0.2 units) UDG for each 50 µl of master mix and vortex thoroughly. The preparation of a master mix is crucial in quantitative PCR reactions to reduce pipetting errors. An UDG treatment of 2 min at 50°C at the onset of thermal cycling removes uracil residues from dU-containing DNA and prevents it from serving as template. UNG is easily heat-inactivated at temperatures above 65°C in the following initial denataration step of the PCR.