



**Gene to Protein Pvt. Ltd.**

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## Uracil-DNA Glycosylase (UDG)

Cat # ME335

Pack Size: 200U

Storage: -20°C



### Introduction

Uracil-DNA Glycosylase (UDG) is a highly specific enzyme that catalyzes the removal of uracil residues from DNA molecules. The enzyme is supplied in a buffer solution containing glycerol.

### Storage buffer

The enzyme is supplied in a storage buffer containing 20 mM Tris-HCl (pH 7.5), 50 mM NaCl, 0.1 mM EDTA, 1 mM DTT, 50%.

### Unit definition

One unit is defined as the amount of enzyme required to release 1 nmol of uracil from a uracil-containing oligonucleotide substrate in 1 hour at 37°C.

### Application

- Removal of uracil residues from DNA templates prior to PCR amplification or sequencing
- Degradation of uracil-containing DNA probes or primers
- Repair of uracil-containing DNA lesions in vitro

### Protocol

1. Thaw Uracil-DNA Glycosylase and reaction buffer on ice.

Set up the reaction as follows:

Component Volume per reaction (µl)

Uracil-containing DNA substrate variable (see step 3)

Uracil-DNA Glycosylase 1

Reaction buffer (10x) 2

Water variable (see step 3)

2. Determine the amount of uracil-containing DNA substrate to be used based on the specific application and the desired level of uracil removal. Typically, 1-2 µg of DNA substrate is used per reaction. Adjust the volume of water accordingly to achieve a final reaction volume of 20 µl.
3. Mix the reaction components thoroughly by pipetting up and down several times.
4. Incubate the reaction at 37°C for 15-30 minutes, depending on the desired level of uracil removal.
5. Inactivate the enzyme by heat treatment at 65°C for 10 minutes or by adding EDTA to a final concentration of 10 mM.
6. Analyze the DNA substrate by the appropriate method (e.g. PCR amplification, cloning).

