TREVIGEN® Product Data

For Research Use Only. Not For Use In Diagnostic Procedures

E. coli Uracil-N-Glycosylase (UNGase)

Catalog #: 4025-100-EB

Contents:

4025-100-01	Uracil-N-Glycosylase	**Size:**	100 Units
3900-500-06	10X REC™ Buffer 6		1 ml

Description: Uracil bases in DNA form by deamination of cytosine, giving rise to C:G to T:A transitions. A known mechanism to correct this DNA base mutation in *E. coli* utilizes Uracil-N-Glycosylase, a DNA glycosylase that removes uracil to generate an AP site (figure).

Source: Purified from *E. coli* containing a recombinant plasmid harboring the *E. coli ung* gene.

Unit Definition: One Unit catalyzes the release of 60 pmoles of uracil from double-stranded DNA at 37°C.

Specificity: Uracil-N-Glycosylase hydrolyzes uracil from single-stranded or double-stranded DNA (see enzyme activity synopsis on reverse), but not from oligonucleotides with 6 or fewer bases. It also recognizes 5-fluorouracil, 5-hydroxy-uracil and isodialuric acid.

Assay Conditions: 1X REC Buffer 6 (20 mM Tris-Cl (pH 8.0)), 1 mM EDTA, 1 mM DTT, 0.1 mg/ml BSA), 0.2 µg ^{3}H-uracil DNA (10^{4}-10^{5} cpm/µg), and 1 unit of enzyme in a reaction volume of 50 µl are incubated for 30 minutes at 37°C.

Storage Buffer: 20 mM Tris-HCl (pH 8.0), 50% (v/v) glycerol, 50 mM NaCl, 1 mM EDTA, 1 mM DTT, and 0.1 mg/ml BSA.

Storage Conditions: Store at ¯20°C in a manual defrost freezer. For long term storage, freeze in working aliquots at ¯80°C. Avoid repeated freeze-thawings.

References:

1. Duncan, B.K., 1981. DNA glycosylases in The Enzymes (Boyer, P.D., ed), pp. 565-586. New York: Academic Press.
2. Friedberg, E.C., G.C. Walker, and W. Siede. 1995. DNA Repair and Mutagenesis. American Society of Microbiology, Washington D.C., ASM Press.
3. Verri, A., P. Mazzarello, S. Spadari, and F. Focher. 1992. Uracil-DNA glycosylases preferentially excise mispaired uracil. *Biochemistry Journal* **287**:1007-1010.
4. Takeuchi, R., S. Kimura, A Saotome, and K. Sakaguchi. 2007. Biochemical properties of a plastidial DNA polymerase of rice. *Plant Mol Biol* **64**:601-611
5. Parlanti, E., G. Locatelli, G. Maga, and E. Dogliotti. 2007 Human base excision repair complex is physically associated to DNA replication and cell cycle regulatory proteins. *Nuc Acids Res* **35**:1569-1577.

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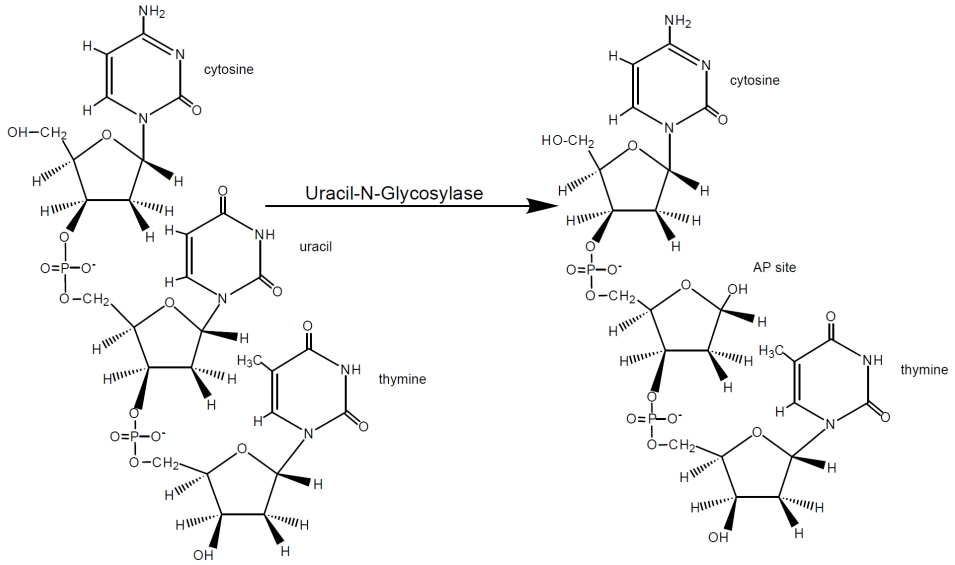

Related Products:

Catalog#	Description	Size
4020-100-EB	Human DNA Polymerase β	100 U
4090-100-EB	Mouse 3-mA DNA Glycosylase (Aag Protein)	100 U
4040-100-EB	*E. coli* Formamidopyrimidine-DNA Glycosylase (Fpg)	500 U
4045-01K-EB	*E. coli* Endonuclease III (Thymine Glycol-DNA Glycosylase)	1000 U
4050-100-EB	*E. coli* Endonuclease IV (nfo protein)	100 U
4055-100-EB	T4 Endonuclease V (T4-Pyrimidine Dimer Glycosylase/T4-PDG)	10^{5} U
4060-01K-EB	*E. coli* Endonuclease VIII	1000 U
4065-100-EB	Chlorella Virus Pyrimidine Dimer Glycosylase (cv-PDG)	1000 U
4070-500-EB	Thermostable TDG enzyme	500 U
4100-100-EB	*S. pombe* UVDE	100 µl
4110-01K-EB	Human Apurinic/Apyrimidinic Endonuclease (hAPE)	1000 U
4120-100-EB	Human FEN-1 (Flap Endonuclease)	100 U
4130-100-EB	Human 8-oxoGuanine DNA Glycosylase (hOGG1)	100 U
4135-250-01	Human Ku 70/80 Complex	250 U

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Storage: -20 °C

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