T5 Exonuclease

(recombinant protein)

Cat. No.	size
E1130-01	1 000 units
E1130-02	5 000 units

T5 Exonuclease is a product of T5 phage D15 gene derived from *E. coli* (1). T5 Exonuclease degrades DNA in a 5'->3' direction and also exhibits endonucleolytic activity on flap structures (branched duplex DNA containing a free single-stranded 5′-end) (2, 5). T5 Exonuclease has been shown to have no effect on double stranded circular DNA (2).

Unit Definition:

One unit of T5 Exonuclease catalyzes the release of 1 nmol of acid-soluble nucleotides from double-stranded calf thymus DNA in 30 minutes at 37°C.

Storage Conditions:

Store at -20°C.

Inactivation:

No heat inactivation.

Concentration:

10 U/µl

Application:

- Plasmid mutagenesis methods.
- Removal of denatured DNA from alkaline-based plasmid purification procedures for improved cloning (4).
- Generation of plasmid sequencing templates.
- Degradation of linear ssDNA, dsDNA or nicked plasmid DNA while maintaining supercoiled plasmid DNA.

Storage Buffer:

50 mM Tris-HCl (pH 7.5), 100 mM NaCl, 0.1 mM EDTA, 0.1% Triton X-100, 1 mM DTT and 50% glycerol.

Quality Control:

T5 Exonuclease is free of detectable RNases or contaminating DNA endonuclease activities. Preparations are greater than 95% pure, as judged by SDS polyacrylamide gel electrophoresis.

Example Reaction:

1. Mix:

Component:	Amount:
DNA	x µl (up to 1 µg)
10 x Buffer ONE	5 µl
T5 Exonuclease	1 µl
Water	to 50 µl

2. Incubate for 15—30 min at 37°C.
3. Add 10 mM EDTA to stop the reaction.
4. Clean-up treated samples by column purification or phenol/chloroform extraction followed by ethanol precipitation.

References:

1. *Kaliman, A.V. et al. (1986) FEBS. 195, 61-64.*
2. *Sayers, J.R. et al. (1991) Nucleic Acids Res. 19, 4127-4132.*
3. *Sayers, J.R. et al. (1990) J. Biol. Chem. 265, 18311.*
4. *Sayers, J.R. et al. (1996) Analytical Biochem. 241, 186.*
5. *Sayers, J.R. et al. (1997) Nucleic Acids Res. 25 (19): 3801-3807*

EURx Ltd. 80-297 Gdańsk Poland ul. Przyrodników 3, NIP 957-07-05-191, KRS 0000202039
www.eurx.com.pl, orders@eurx.com.pl, *tel.* +48 58 524 06 97, *fax* +48 58 341 74 23