enzynomics

Klenow DNA Polymerase (DNA polymerase I large fragment)

Cat.#	Size	Conc.
KP001S	200 units	5 units/μl
KP001M	400 units	5 units/μl
KP001L	1,000 units	5 units/μl

Store at -20℃

Supplied with: 10X Klenow DNA Polymerase Buffer
Sterile water

India Contact:

Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura,
Delhi – 110034 (INDIA).
Ph: +91-11-42208000, 42208111, 42208222
Mobile: +91-9810521400
Fax: +91-11-42208444
Email: customerservice@lifetechindia.com
Web: www.lifetechindia.com

Product description

Klenow DNA Polymerase is a truncated version of E. coli DNA polymerase I, which lacks the 5'->3' exonuclease activity. Since it contains intact 3'->5' proofreading exonuclease activity in addition to 5'->3' polymerase, its fidelity of DNA synthesis equals to that of the full-length E. coli DNA polymerase I. It also contains strand displacement activity for nick translation.

Characteristics

- Molecular weight: 68 KDa
- Reaction temperature: up to 60℃
- Heat inactivation: 75℃, 20 min
- Specific activity: 20,000 units/mg

Applications

- Radioisotope labeling of double stranded DNA with recessed 3' ends.
- Filling-in of 5' overhangs to produce blunted duplex ends
- Removal of 3' overhangs to produce blunted duplex ends
- Second strand synthesis of cDNA obtained by reverse transcriptase
- Radioisotope labeling of DNA with random primers

For Research Use Only. Not for use in diagnostic procedures.

ISO9001 ISO14001 ISO13485

Quality control

- Purity: >99% on SDS-PAGE
- Endonuclease-free
- Exonuclease-free
- RNase-free

Unit definition

One unit is defined as the amount of enzyme required to incorporate 10 nmol of dNTP into acid-insoluble materials with 70 mg/ml of denatured herring sperm DNA as template in 30 min at 37℃.

Storage buffer

100 mM KPO4 (pH 6.5), 1 mM DTT, 50% glycerol.

10X Klenow DNA Polymerase buffer

100 mM Tris-HCl (pH 7.9), 100 mM MgCl2, 10 mM DTT, 500 mM NaCl.

LIFE TECH Life Technologies™
Your Molecular & Cell Technology Partner

Standard PCR conditions

- Fill-in reaction of 3' ends of duplex DNA

10X Klenow DNA Polymerase Buffer	2 μl
Klenow DNA Polymerase (5 units/μl)	1 μl
dNTP Mixture (0.5 mM each)	0.5 μl
DNA digested with restriction endonucleases (0.1-4 μg/μl)	1 μl
Sterile water	up to 20 μl

→ Incubate at 37oC for 10 min.
→ Terminate reaction by incubating at 75℃ for 20 min.

- Radioisotope labeling of double-strand DNA with recessed 3' ends

10X Klenow DNA Polymerase Buffer	2 μl
Klenow DNA Polymerase (5 units/μl)	0.2 μl
dNTP Mixture (0.5 mM each)	2.5 μl
[α-32P] dNTP (3,000 Ci/mmol)	80 μCi
Digested DNA (0.1-4 μg/μl)	1 μl
Sterile water	up to 20 μl

→ Incubate at 37℃ for 10 min.
→ Terminate reaction by incubating at 75℃ for 20 min.

enzynomics

Klenow DNA Polymerase (DNA polymerase I large fragment)

Cat.#	Size	Conc.
KP001S	200 units	5 units/μl
KP001M	400 units	5 units/μl
KP001L	1,000 units	5 units/μl

Store at -20℃

Supplied with: 10X Klenow DNA Polymerase Buffer
Sterile water

India Contact:

Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura,
Delhi – 110034 (INDIA).
Ph: +91-11-42208000, 42208111, 42208222
Mobile: +91-9810521400
Fax: +91-11-42208444
Email: customerservice@lifetechindia.com
Web: www.lifetechindia.com

Product description

Klenow DNA Polymerase is a truncated version of E. coli DNA polymerase I, which lacks the 5'->3' exonuclease activity. Since it contains intact 3'->5' proofreading exonuclease activity in addition to 5'->3' polymerase, its fidelity of DNA synthesis equals to that of the full-length E. coli DNA polymerase I. It also contains strand displacement activity for nick translation.

Characteristics

- Molecular weight: 68 KDa
- Reaction temperature: up to 60℃
- Heat inactivation: 75℃, 20 min
- Specific activity: 20,000 units/mg

Applications

- Radioisotope labeling of double stranded DNA with recessed 3' ends.
- Filling-in of 5' overhangs to produce blunted duplex ends
- Removal of 3' overhangs to produce blunted duplex ends
- Second strand synthesis of cDNA obtained by reverse transcriptase
- Radioisotope labeling of DNA with random primers

For Research Use Only. Not for use in diagnostic procedures.

Quality control

- Purity: >99% on SDS-PAGE
- Endonuclease-free
- Exonuclease-free
- RNase-free

Unit definition

One unit is defined as the amount of enzyme required to incorporate 10 nmol of dNTP into acid-insoluble materials with 70 mg/ml of denatured herring sperm DNA as template in 30 min at 37℃.

Storage buffer

100 mM KPO4 (pH 6.5), 1 mM DTT, 50% glycerol.

10X Klenow DNA Polymerase buffer

100 mM Tris-HCl (pH 7.9), 100 mM MgCl2, 10 mM DTT, 500 mM NaCl.

LIFE TECH Life Technologies™
Your Molecular & Cell Technology Partner

Standard PCR conditions

- Fill-in reaction of 3' ends of duplex DNA

10X Klenow DNA Polymerase Buffer	2 μl
Klenow DNA Polymerase (5 units/μl)	1 μl
dNTP Mixture (0.5 mM each)	0.5 μl
DNA digested with restriction endonucleases (0.1-4 μg/μl)	1 μl
Sterile water	up to 20 μl

→ Incubate at 37oC for 10 min.
→ Terminate reaction by incubating at 75℃ for 20 min.

- Radioisotope labeling of double-strand DNA with recessed 3' ends

10X Klenow DNA Polymerase Buffer	2 μl
Klenow DNA Polymerase (5 units/μl)	0.2 μl
dNTP Mixture (0.5 mM each)	2.5 μl
[α-32P] dNTP (3,000 Ci/mmol)	80 μCi
Digested DNA (0.1-4 μg/μl)	1 μl
Sterile water	up to 20 μl

→ Incubate at 37℃ for 10 min.
→ Terminate reaction by incubating at 75℃ for 20 min.