

Axen™ Taq DNA Polymerase

일반적으로 가장 많이 사용하는 기본 Taq DNA Polymerase

Taq DNA Polymerase는 PCR을 사용해서 DNA fragment를 3kb까지 안정적으로 증폭시킬 수 있는 강력한 효소입니다.

제품 설명

Thermus aquaticus BM에서 유래된 DNA polymerase gene을 *E. coli*로부터 발현시킨 후 정제 과정을 거친 내열성의 Taq DNA Polymerase입니다.

제품 특징

- Enzyme activities: Highly processive 5'-3' DNA polymerase; double strand specific 5'-3' exonuclease; no 3'-5' exonuclease activity
- pH optimum: Approximately 9.0 (+20°C)
- Temperature optimum: Approximately +75°C
- Half life at +95°C: Approximately 40 minutes
- Substrates: Incorporates dNTP, dUPT, dITP, various labeled or modified nucleotides (200 µmol/L each is recommended of normal dNTP, increased concentrations of variants)

제품 응용

Use Taq DNA Polymerase, 5 U/µl, for:

- Routine PCR and RT PCR applications
- Amplification of DNA fragments up to 3 kb from various sources of DNA
- Labeling of DNA with modified nucleotides (DIG-dUTP, biotin-dUTP, fluorescein-dUTP)
- Combination with dUTP and Uracil-DNA Glycosylase for prevention of carryover contamination during PCR reactions
- Manufacture of amplification mixtures for applications with regulatory requirements (*invitro* diagnostics, quality control)

주문 정보

Product	Quantity	Cat. No.
Axen™ Taq DNA Polymerase	500 U	MG-E-001-500
Axen™ Taq DNA Polymerase	1,000 U	MG-E-001-1000
Axen™ Taq PCR Master Mix (2X)	5 X 1.0 mL	MG-E-004-5
Axen™ Taq PCR Master Mix (2X, with dye)	5 X 1.0 mL	MG-E-007-5

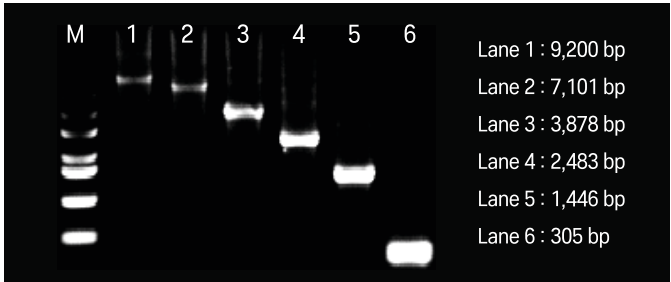


Figure. 6 fragments (0.3~9.2 kb) were amplified with Axen™ Taq DNA Polymerase, producing PCR products with high specificity and yields.

Axen™ H Taq DNA Polymerase

PCR의 특이성과 효율이 향상되는 Hot-Start DNA polymerase

Macrogen Axen™ H Taq DNA Polymerase는 뛰어난 성능과 효율성이 장점입니다. 높은 재현성과 정확성을 중점으로 설계된 Axen™ H Taq DNA Polymerase는 어떠한 template, application과 target에서도 원하는 결과를 쉽게 얻을 수 있습니다.

왜 Hot-Start PCR을 사용해야 하는가?

- Prevents amplification of nonspecific products
- Amplifies low-abundance targets
- Provides convenient room temperature setup

왜 AXEN™ H Taq DNA Polymerase인가?

Axen™ H Taq DNA Polymerase는 낮은 온도에서 비활성 상태를 유지할 수 있도록 화학적으로 변형된 Hot Start PCR polymerase 입니다. Denaturation 단계에서 활성화되므로, initial denaturation 단계가 필요합니다. 이 제품은 PCR 시작 전 낮은 온도에서 발생하는 비특이 반응을 억제하여 PCR의 특이성 및 효율이 향상됩니다.

주요 특징

- Minimized optimization of primer annealing temperatures
- Optimized Axen™ H Taq buffer, which includes 20mM MgCl₂
- Ability to use same cycling conditions as used with conventional Taq polymerase
- Wide range of amplicon lengths
- 2X master mix formats
- Direct loading options
- Compatibility with most PCR applications

주문 정보

Product	Quantity	Cat. No.
Axen™ H Taq DNA Polymerase	500 U	MG-E-002-500
Axen™ H Taq DNA Polymerase	1,000 U	MG-E-002-1000
Axen™ H Taq PCR Master Mix(2X)	5 X 1.0 mL	MG-E-005-5
Axen™ H Taq PCR Master Mix (2X, with dye)	5 X 1.0 mL	MG-E-008-5

기술 세부사항

- Amplifies from as little as 3 pg human genomic DNA
- Routinely amplifies up to 6 kb genomic DNA and 20kb lambda DNA
- Generates 3' -dA overhangs
- Incorporates dUTP and modified nucleotides

사용과 응용

- Amplification of DNA from plasmid, viral or complex genomic templates
- Colony PCR
- Genotyping
- RT-PCR
- Generation of PCR products for TA cloning

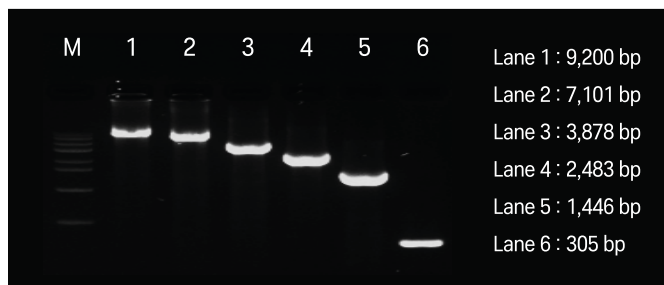


Figure. 6 fragments (0.3~9.2 kb) were amplified with Axen™ H Taq DNA Polymerase, producing PCR products with high specificity and yields.

Axen™ High-Q DNA Polymerase

쉽게 사용할 수 있으며 높은 성공률을 보장하는 PCR enzyme

Axen™ High-Q DNA Polymerase는 DNA binding domain에 *Pyrococcus* polymerase-like high-fidelity 효소가 결합되어 있습니다.

이 특유한 단백질 융합 기술로 Axen™ High-Q DNA Polymerase는 높은 정확도와 민감도의 PCR product를 생성 가능하며, 생성 시 inhibitor에 방해받지 않습니다.

특별히 제작된 reaction buffer는 primer annealing 온도를 계산하지 않고도 PCR 증폭을 시킬 수 있으므로 PCR 수행 시 시간을 절약할 수 있고, 실수를 줄일 수 있습니다.

주요 특징

- **High fidelity:** provides >100x higher sequence accuracy than Taq polymerase
- **Convenient setup:** allows for a universal annealing temperature of 60°C
- **Enhanced specificity:** reduces nonspecific amplification and primer degradation via hot-start modification
- **Benchtop stability:** enables lab automation setup since assembled reactions are stable at room temperature for 24 hours
- **High inhibitor tolerance:** works with DNA of suboptimal purity

주문 정보

Product	Quantity	Cat. No.
Axen™ High-Q DNA Polymerase	250 U	MG-E-003-250
Axen™ High-Q DNA Polymerase	500 U	MG-E-003-500
Axen™ High-Q PCR Master Mix (2X)	5 X 1.0 mL	MG-E-006-5
Axen™ High-Q PCR Master Mix (2X, with dye)	5 X 1.0 mL	MG-E-009-5

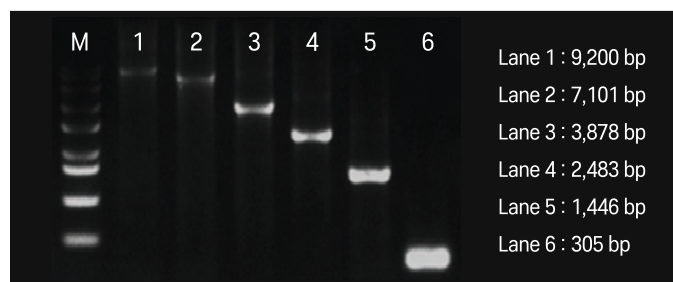


Figure. 6 fragments (0.3~9.2 kb) were amplified with Axen™ High-Q DNA Polymerase, producing PCR products with high specificity and yields.

