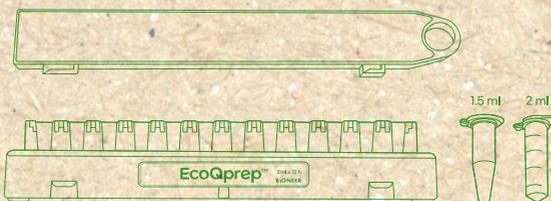
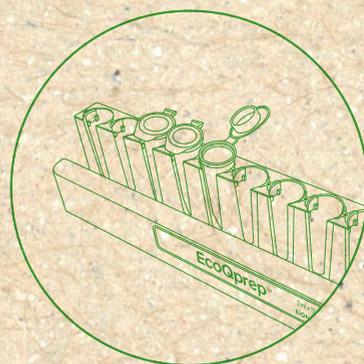


EcoQprep™

Magnetic Bead-based
Preparation and Purification Solution



BIONEER Corporation.
Healthier Future for
Humanity with Genomic Technology

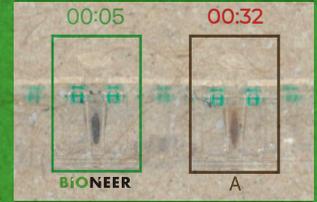
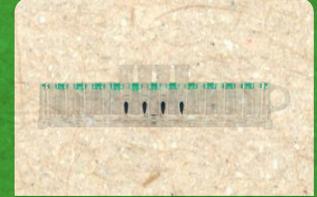
친환경 연구실을 위한
스마트한 선택!

EcoQprep™

EcoQprep™은 바이오니아의 자성 나노비드인, *AccuNanoBead™*를 활용한 핵산 추출 제품으로 Magnetic Separation Rack을 이용해 간편하게 핵산을 추출할 수 있습니다.

*AccuNanoBead™*는 적용된 작용기(Functional group)에 따라 다양한 용도로 활용할 수 있는 자성 나노입자로 EcoQprep™에는 Chaotropic salts가 존재하는 환경에서 핵산과 빠르게 결합하는 실리카(Silica, SiO₂) 비드가 적용되었습니다.

또한, *AccuNanoBead™*의 코어는 일반적인 Polystyrene 기반 비드와 달리 강한 자력을 발휘하는 순수한 자성체인 페라이트(Fe₃O₄)로 이루어져 보다 친환경적이며 빠르고 효율적인 핵산 정제가 가능합니다.



당신의 연구실,
얼마나 친환경적인가요?

AccuNanoBead™를
이용한 EcoQprep™
무엇이 특별할까요?



Fast

- 강한 자성을 통해 입자 포집 시간을 단축하여 실험 시간을 효과적으로 감소시킵니다.
- 원심분리기를 사용하는 Spin column 방식 대비 빠른 핵산 정제가 가능합니다.

Convenient

- 간편한 Workflow: 파이펫팅 없이 rack을 뒤집어 용액을 쉽게 제거할 수 있습니다.
- Kit 유연성: 단일 kit로 mini부터 maxi scale까지 다양한 샘플 처리가 가능합니다.
- Rack 디자인: 투명한 소재를 적용하여 비드 및 샘플 관찰이 용이하며, tube를 장착한 상태에서 vortexing이 가능하도록 설계되었습니다.

Eco-friendly

- 원심분리기를 사용하지 않아 전력 소비가 없으며 실험 과정에서 발생하는 플라스틱 폐기물을 최소화합니다.
- *AccuNanoBead™*는 플라스틱 폴리머를 사용하지 않은 자성 나노입자로, 미세플라스틱 오염을 줄이는데 기여합니다.

EcoQprep™ Universal RNA Kit

- ✓ 배양 세포, 동물 조직, 식물 조직 등 다양한 샘플 시료로부터 고순도, 고수율의 RNA 추출 가능
- ✓ Mini, midi scale을 하나의 kit로 사용 가능

RNA

제품 규격/사항

Scale	Mini	Midi
Expected RNA yield	~ 100 µg	~ 500 µg
Minimum elution volume	50 µl	500 µl
Preparation time	~ 10 min	~ 15 min

Sample type	Starting amount	RNA yield	Expected purity*
Cultured cells	10 ⁴ - 10 ⁸ cells	15 - 20 µg	A _{260/280} > 2.0 A _{260/230} > 1.7
Liver	25 - 50 mg	10 - 60 µg	
Spleen	100 mg	30 - 60 µg	
Plant / Tissue	100 mg	70 - 80 µg	

* 시료의 종류에 따라 측정 값의 차이가 있을 수 있습니다.

구성품

RD Buffer	30 ml × 1 ea
RWMB1 Buffer	25 ml × 1 ea
RWB2 Buffer	15 ml × 1 ea
WE Buffer	40 ml × 1 ea
ER Buffer	25 ml × 1 ea
Magnetic Nanobead	6 ml × 1 ea
1,5 ml Tube	50 ea × 1 pack
사용설명서	1 ea



* mini-50 rxn, midi-5 rxn

실험 결과



B: EcoQprep™ Universal RNA Kit A: Competitor A kit (column type)

Product	Conc. (ng/µl)	Purity (A ₂₆₀ /A ₂₈₀)	Purity (A ₂₆₀ /A ₂₃₀)
EcoQprep™	249.9	2.08	2.19
	282.8	2.05	2.24
Competitor A	228.6	2.07	2.17
	205.2	2.08	1.54

Product	Conc. (ng/µl)	Purity (A ₂₆₀ /A ₂₈₀)	Purity (A ₂₆₀ /A ₂₃₀)
EcoQprep™	753.8	2.20	2.23
	703.8	2.15	1.76
Competitor A	635.4	2.19	2.00
	642.8	2.18	1.01

Product	Conc. (ng/µl)	Purity (A ₂₆₀ /A ₂₈₀)	Purity (A ₂₆₀ /A ₂₃₀)
EcoQprep™	511.0	2.08	2.26
	510.9	2.05	2.24
Competitor A	461.7	2.12	1.89
	490.1	2.10	2.01

Cultured cell RNA extraction using EcoQprep™ Universal RNA Kit.
RNA extraction from 1 × 10⁶ cells of HeLa cell.

Plant RNA extraction using EcoQprep™ Universal RNA Kit.
RNA extraction from 100 mg of *Brassica oleracea* var. *italica*
DNase was not treated.

Animal tissue RNA extraction using EcoQprep™ Universal RNA Kit.
RNA extraction 20 mg of *Mus musculus* liver tissue.
DNase was not treated.

- ◆ Comparison of RNA extracted with EcoQprep™ Universal RNA Kit and Competitor A kit (column type).
Total RNA was extracted using EcoQprep™ Universal RNA Kit and Competitor A kit (column type), analyzed by agarose gel electrophoresis.
Concentration and purity were measured using a Nanodrop.

EcoQprep™ Genomic DNA Kit

- ✓ Whole blood, cultured cells, animal tissues, bacteria (Gram (-), (+)) 등 다양한 시료로부터 genomic DNA 추출 가능
- ✓ 1×10^4 cells 이하의 소량 샘플에서도 genomic DNA 추출 가능
- ✓ Mini, midi, maxi scale을 하나의 kit로 사용 가능

DNA

제품 규격/사항

Scale	Mini (Typical yield [μg])	Midi (Typical yield [μg])	Maxi (Typical yield [μg])
Whole blood	200 μl (< 10 μg)	2 ml (< 80 μg)	4 ml (< 150 μg)
Cultured cell	~ 1×10^6 cells (< 12 μg)	~ 5×10^6 cells (< 60 μg)	~ 1×10^7 cells (< 120 μg)
Animal tissue	~ 25 mg (< 10 μg)	~ 100 mg (< 40 μg)	~ 250 mg (< 120 μg)
Bacteria (Gram (-), (+))	~ 1×10^9 cells (< 15 μg)	~ 5×10^9 cells (< 80 μg)	~ 1×10^{10} cells (< 150 μg)
Preparation time	< 5 min	< 10 min	< 15 min
Expected purity	$A_{260}/A_{280} > 1.8$		

* 시료의 종류에 따라 측정 값의 차이가 있을 수 있습니다.

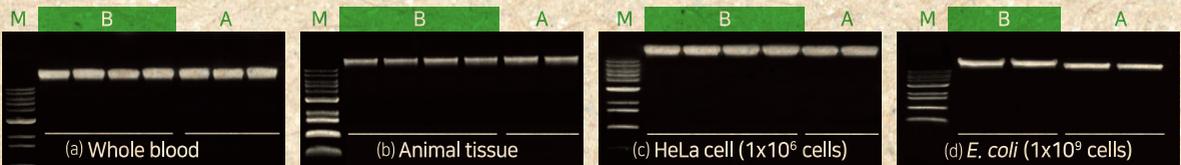
구성품

TL Buffer	15 ml × 1 ea
GB Buffer	15 ml × 1 ea
WM1 Buffer	30 ml × 1 ea
WB2 Buffer	10 ml × 1 ea
WE Buffer	40 ml × 1 ea
EA Buffer	25 ml × 1 ea
RNase A powder, lyophilized	24 mg × 1 ea
Proteinase K, lyophilized	25 mg × 1 ea
Poly(A), lyophilized	1 mg × 1 ea
Magnetic Nanobead	6 ml × 1 ea
1.5 ml Tube	50 ea × 1 pack
사용설명서	1 ea

* mini-50 rxn, midi-7 rxn, maxi-3 rxn



실험 결과



M: 1 kb DNA ladder (Cat. No. D-1040, Bioneer) B: EcoQprep™ Genomic DNA Kit A: Competitor A kit (column type)

Sample	EcoQprep™		Competitor A	
	Yield (μg)	Purity (A_{260}/A_{280})	Yield (μg)	Purity (A_{260}/A_{280})
Whole blood	6.45	1.85	5.53	1.85
Animal tissue	5.48	1.86	5.60	1.85
HeLa cell (1×10^6 cells)	24.1	1.92	23.3	2.00
<i>E. coli</i> (1×10^9 cells)	14.7	1.83	15.5	2.05

◆ Comparison of genomic DNA extracted using EcoQprep™ Genomic DNA Kit with competitors' kits (column type).

◆ High-quality gDNA from a variety of samples

Genomic DNA was extracted using EcoQprep™ Genomic DNA Kit and Competitor A kit (column type), analyzed by agarose gel electrophoresis.

- (a) DNA was extracted from 200 μl samples of whole blood, and 4 μl aliquot was analyzed by gel electrophoresis.
- (b) DNA was extracted from 15 mg samples of porcine skeletal muscle tissue, and 1 μl aliquot was analyzed by gel electrophoresis.
- (c) DNA was extracted from 1×10^6 cells of HeLa cell, and 1 μl aliquot was analyzed by gel electrophoresis.
- (d) DNA was extracted from 1×10^9 cells of *Escherichia coli* (DH5α), and 2 μl aliquot was analyzed by gel electrophoresis.

EcoQprep™ Plant Genomic DNA Kit

- ✓ 식물의 잎, 줄기, 뿌리, 종자 등 다양한 시료로부터 고순도, 고수율의 genomic DNA 추출 가능
- ✓ 다양한 식물 종자 및 조직 세포에 최적화된 Lysis buffer 제공
- ✓ Mini, midi, maxi scale을 하나의 kit로 사용 가능

DNA

제품 규격/사항

Scale	Mini	Midi	Maxi
Plant tissue	~ 100 mg	~ 500 mg	~ 1 g
Seed	~ 50 mg	~ 250 mg	~ 500 mg
Elution volume	100 µl	500 µl	1 ml
Typical DNA yield*	5 - 15 µg	15 - 80 µg	30 - 150 µg
Expected purity	$A_{260}/A_{280} > 1.8$		

* 시료의 종류에 따라 측정 값의 차이가 있을 수 있습니다.

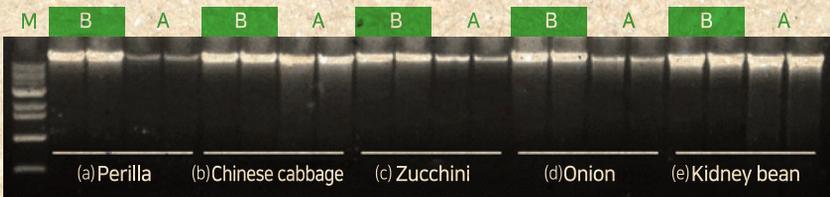
구성품

PL Buffer	20 ml × 1 ea
PC Buffer	15 ml × 1 ea
PWM1 Buffer	25 ml × 2 ea
WB2 Buffer	10 ml × 1 ea
WE Buffer	40 ml × 1 ea
EA Buffer	25 ml × 1 ea
RNase A powder, lyophilized	24 mg × 1 ea
Proteinase K, lyophilized	25 mg × 1 ea
Magnetic Nanobead	6 ml × 1 ea
1.5 ml Tube	50 mg × 1 pack
사용설명서	1 ea

* mini-50 rxn, midi-7 rxn, maxi-3 rxn



실험결과



M: 1 kb DNA ladder (Cat. No. D-1040, Bioneer)

B: EcoQprep™ Plant Genomic DNA Kit

A: Competitor A kit (column type)

Scale	EcoQprep™		Competitor A	
	Yield (µg)	Purity (A_{260}/A_{280})	Yield (µg)	Purity (A_{260}/A_{280})
Perilla	7.1	1.80	3.5	1.85
Chinese cabbage	5.9	1.82	4.7	1.82
Zucchini	3.6	1.77	3.0	1.79
Onion	5.5	1.80	1.6	1.84
Kidney bean	7.7	1.73	6.6	1.80

Comparison of genomic DNA from plant extracted with EcoQprep™ Plant Genomic DNA Kit with competitor's kit (column type).

DNA extraction from various samples

Genomic DNA was extracted using EcoQprep™ Plant Genomic DNA Kit and Competitor A kit (column type), analyzed by agarose gel electrophoresis. Each 4 µl of purified DNA was analyzed by gel electrophoresis. DNA yield and purity were measured using a Nanodrop, and the values presented in table are the averages.

(a) Perilla (*Perilla frutescens* var. *japonica* Regel) tissue 100 mg, (b) Chinese cabbage (*Brassica rapa* var. *glabra* Regel) tissue 100 mg, (c) Zucchini (*Cucurbita pepo*) tissue 100 mg, (d) Onion (*Allium cepa*) tissue 100 mg, (e) Kidney Bean (*Phaseolus vulgaris*) seed 50 mg.

EcoQprep™

Kit

Plasmid DNA

EcoQprep™ Plasmid Kit

Coming Soon

Cat. No. K-3700 규격 50 rxn
Cat. No. K-3700-1 규격 200 rxn

Genomic DNA

EcoQprep™ Genomic DNA Kit

Cat. No. K-3701 규격 50 rxn
Cat. No. K-3701-1 규격 200 rxn

EcoQprep™ Plant Genomic DNA Kit

Cat. No. K-3702 규격 50 rxn
Cat. No. K-3702-1 규격 200 rxn

Cell-free DNA

EcoQprep™ cfDNA Kit

Coming Soon

Cat. No. K-3704 규격 50 rxn

Viral DNA/RNA

EcoQprep™ Viral DNA/RNA Kit

Coming Soon

Cat. No. K-3705 규격 50 rxn
Cat. No. K-3705-1 규격 200 rxn

Total RNA

EcoQprep™ Universal RNA Kit

Cat. No. K-3706 규격 50 rxn
Cat. No. K-3706-1 규격 200 rxn

PCR/Gel

EcoQprep™ PCR/Gel Kit

Coming Soon

Cat. No. K-3707 규격 50 rxn
Cat. No. K-3707-1 규격 200 rxn

Magnetic Bead Separator

Rack

EcoQprep™ Magnetic Separation Rack

Cat. No. TM-1012 규격 2 ml tube × 12 holes
Cat. No. TM-1021 규격 15 ml tube × 6 holes Coming Soon
Cat. No. TM-1031 규격 50 ml tube × 3 holes Coming Soon

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Innovation · Value · Discovery

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