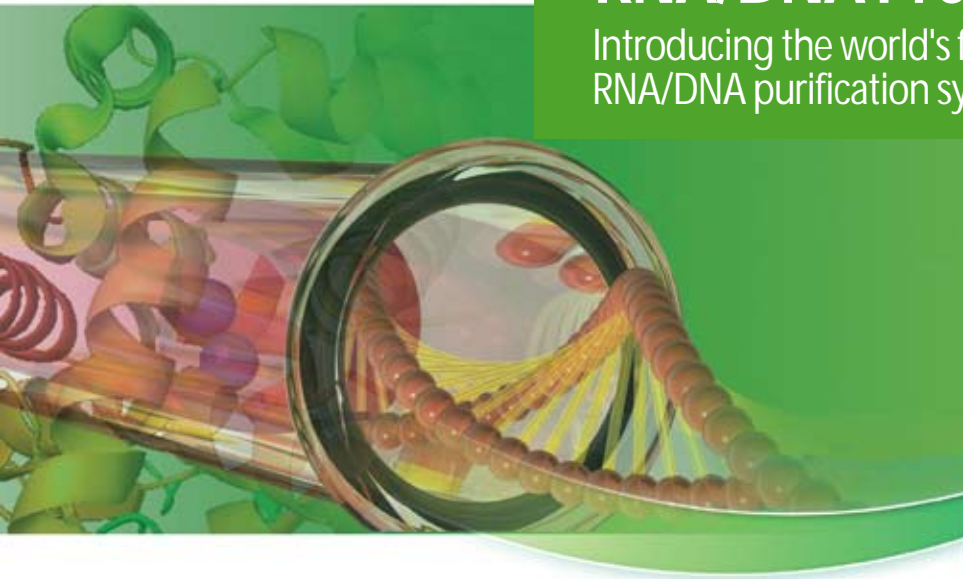


ExiProgen™ Protein Synthesis RNA/DNA Prep System

Introducing the world's first automated protein synthesis and
RNA/DNA purification system!



NEW
Introductory
Price only
\$15,000

BIONEER
Innovation • Value • Discovery

ExiProgen™ - Automated Protein Synthesis/Purification System ●●●

Bioneer's ExiProgen™ is the world's first automated protein synthesis and RNA/DNA purification system. Proteins can be expressed *in vitro* and affinity purified (using His-tag purification) for proteins up to 110 kD in size. Up to 16 different types of highly pure proteins can be obtained each from 6~10µg of DNA. (Figure 1) Because the entire process is automated, you will obtain reliable and reproducible results run after run.

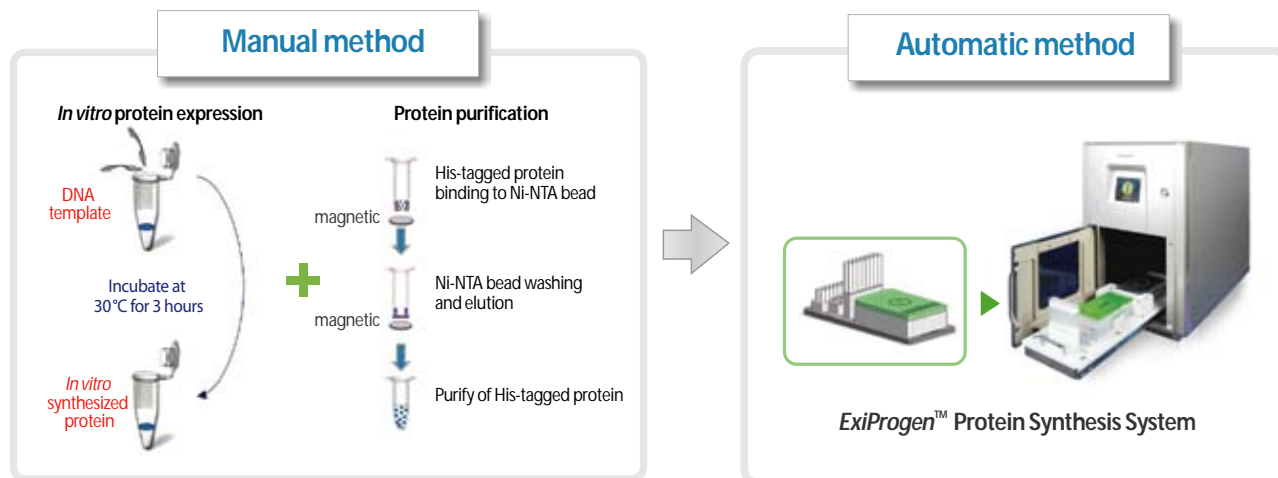


Figure 1. Principle of protein synthesis with ExiProgen™

Left panel: Manual method of protein expression/purification - sequential and tedious

Right panel: Automated method of protein expression/purification - simply add DNA and press start!

Features and Benefits

- **Fully automatic: DNA-in-Protein-out**
Pipette 6~10µg of DNA into the kit and load into ExiProgen™ for high-purity proteins within 6 hours.
- **Parallel Process**
Synthesize and purify 1 to 16 unique proteins simultaneously.
- **High performance**
The system enables synthesis of proteins that are toxic to *in vivo* expression systems.
- **High purity and High yield**
Each well will yield up to 100µg protein that is over 90% pure.
- **Reproducibility**
Since you only need to add template DNA to obtain your protein, reproducibility is maximized.

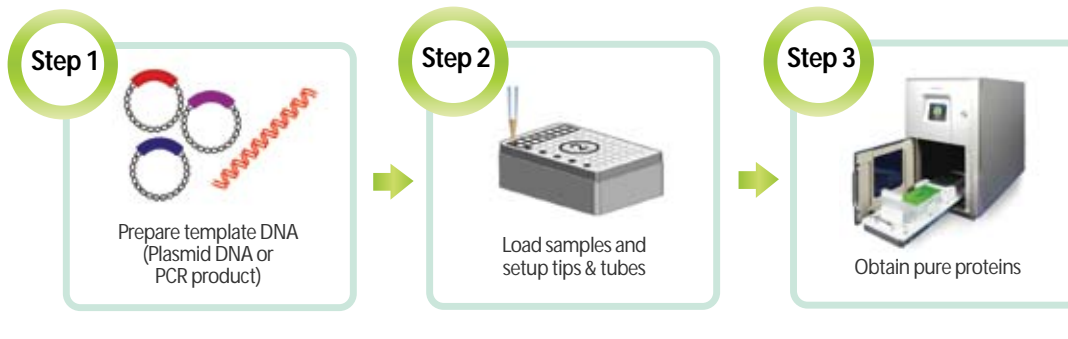
Template DNA

The template DNA for protein synthesis can be in plasmid or PCR product form. Bioneer's Gene Synthesis Service will provide template DNA that is optimized for expression with ExiProgen™ kits. For maximum protein synthesis, we recommend you choose our **ExiProgen™ Gene Synthesis Service**. Please visit our homepage (www.bioneer.com) for more information.

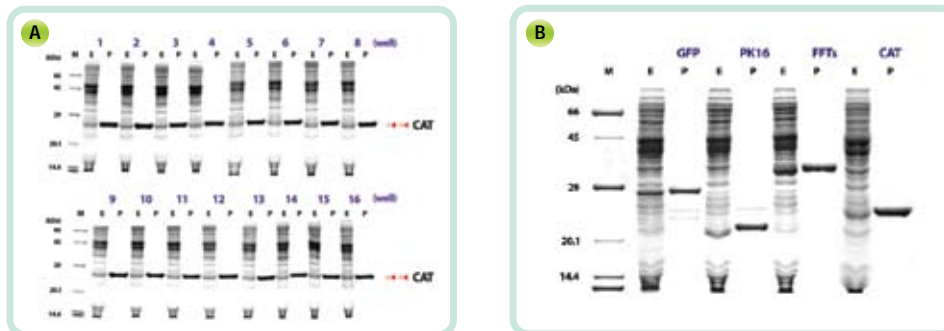
Experimental Data

• Experimental Procedure

- Template DNA: 6-10µg / 40µl
- ExiProgen protocol number: 902
- Total reaction time: <6 hr
- Total yield: ~100µg/reaction



• Experimental Results



This data illustrates that the *ExiProgen™* can express and purify up to 16 proteins per run with consistently high purity over 90%.

Panel A: Protein synthesis data of CAT (Chloramphenicol Acetyl Transferase)

Lane 1-16: Number of wells, Lane M: *AccuLadder™* Protein Size Marker (Low), Lane E: Expression sample, Lane P: Purification sample

Panel B: Protein synthesis data of various proteins

Top of the lane: Protein type, Lane M: *AccuLadder™* Protein Size Marker (Low), Lane E: Expression sample, Lane P: Purification sample

Ordering Information

Product	Cat. No.	Pricing
<i>ExiProgen™</i>	A-5041	\$15,000.00*
<i>ExiProgen™</i> EC1 Protein Synthesis Kit, 16 reactions	K-7300	\$708.00
<i>ExiProgen™</i> EC1 Protein Synthesis Kit, 32 reactions	K-7301	\$1,188.00
<i>ExiProgen™</i> EC1 Protein Synthesis Kit, 96 reactions	K-7302	\$2,940.00
pBIVT vector set-1, 5µg each	K-7350	\$240.00
Gene Synthesis Service	S-2041	Inquire

* Special introductory price.

ExiProgen™ - Automated RNA Extraction System ●●●

Features and Benefits

- All reagents necessary for total RNA extraction are contained within the pre-filled Buffer Cartridges.
- Additional user convenience is provided with RNase-free disposable filter tips and elution tubes, which are all provided within the kit packaging.
- Total RNA can be extracted from a minimum of 1 to a maximum of 16 samples simultaneously.
- Silica magnetic particles developed in-house with Bioneer technology (Korea Patent No. 10-1053023) for unparalleled performance.
- Top-notch reproducibility by using an automated extraction system (ExiProgen™).

1. Total RNA Extraction from Animal tissue

● **Experimental Procedure**

Step 1: Prepare animal tissue sample

Step 2: Pre-treat tissue sample

Step 3: Load samples and setup tips & tubes

Step 4: Obtain pure total RNA

● **Experimental Results**

a) Electrophoresis result

b) Real time RT-PCR result

a) Electrophoresis result using LabChip® GX (Caliper Life science) with extracted total RNAs from rat liver samples. Average yield is up to 25µg and RQS (RNA Quality Score) is over 9.5.

b) Real time RT-PCR results using Exicycler™ 96 Real-Time Quantitative PCR System (A-2060).

2. Total RNA Extraction from Cultured cells

● **Experimental Procedure**

Step 1: Prepare cultured cells

Step 2: Load samples and setup tips & tubes

Step 3: Obtain pure total RNA

● **Experimental Results**

a) Electrophoresis result

b) Real time RT-PCR result

a) Electrophoresis result using LabChip® GX (Caliper Life science) with extracted total RNAs from HeLa cell (1 x 10⁶ cells) samples. Average yield is up to 10µg and RQS (RNA Quality Score) is over 9.5.

b) Real time RT-PCR results using Exicycler™ 96 Real-Time Quantitative PCR System (A-2060).

Ordering Information

Product	Cat. No.	Price
ExiPrep™ Tissue total RNA Kit, 96 reactions	K-3325	\$385.00
ExiPrep™ Cell total RNA Kit, 96 reactions	K-3335	\$385.00

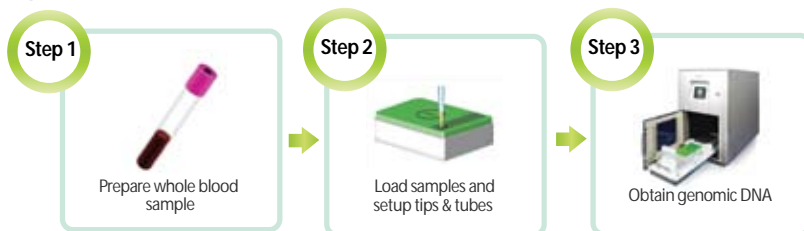
ExiProgen™ - Automated DNA Extraction System ●●●

Features and Benefits

- All reagents and enzymes necessary for genomic DNA extraction are contained within the pre-filled Buffer Cartridges.
- The DNase-free disposable filter tips, elution tubes and other consumables are contained within the kit packaging for added convenience.
- Genomic DNA can be extracted from 1 to up to 16 samples simultaneously.
- Silica magnetic particles developed in-house with Bioneer technology (Korea Patent No. 10-1053023) for unparalleled performance.
- Top-notch reproducibility by using an automated extraction system (ExiProgen™).

1. Genomic DNA Extraction from Whole blood

• Experimental Procedure



• Experimental Results

a) Electrophoresis result



b) Real time RT-PCR result

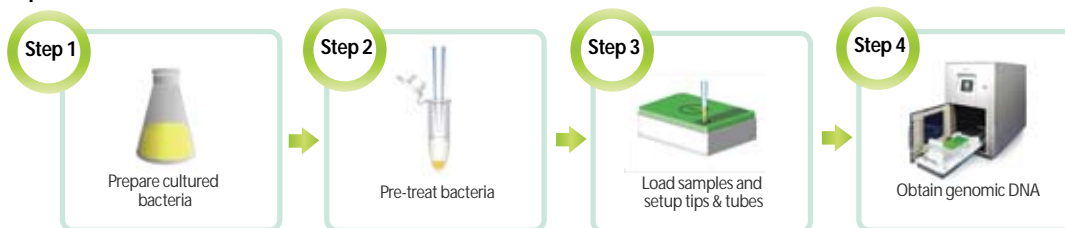


a) Electrophoresis result using 1% agarose gel with extracted genomic DNAs from 200µl of whole bloods. Odd number is extracted samples from whole blood and even number is extracted samples from D.W only. Average yield is up to 3-5µg and purity(A_{260/280}) is over 1.8.

b) Real time PCR results using Exicycler™ 96 Real-Time Quantitative PCR System (A-2060).

2. Genomic DNA Extraction from Bacterial cells

• Experimental Procedure

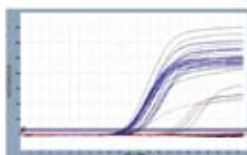


• Experimental Results

a) Electrophoresis result



b) Real time RT-PCR result



a) Electrophoresis result using 1% agarose gel with extracted genomic DNAs from *E.coli* cells (1X10⁹ cells). Odd number is extracted samples from *E.coli* cells and even number is extracted samples from D.W only. Average yield is up to 10µg and purity(A_{260/280}) is over 1.8.

b) Real time PCR results using Exicycler™ 96 Real-Time Quantitative PCR System (A-2060).

Ordering Information

Product	Cat. No.	Price
ExiPrep™ Blood Genomic DNA Kit, 96 reactions	K-3215	\$264.00
ExiPrep™ Tissue Genomic DNA Kit, 96 reactions	K-3225	\$264.00
ExiPrep™ Bacteria Genomic DNA Kit, 96 reactions	K-3245	\$264.00

Product	Cat. No.	Price
ExiPrep™ Plant Genomic DNA Kit, 96 reactions	K-3255	\$264.00
ExiPrep™ Beef Genomic DNA Kit, 96 reactions,	K-3200-CB	\$264.00
ExiPrep™ Rice Genomic DNA Kit, 96 reactions	K-3200-CR	\$264.00

ExiProgen™ - Automated Protein Synthesis and Nucleic Acid Extraction System ●●●



- The world's first system capable of expressing and purifying protein and extracting nucleic acids.
- Obtain up to 100µg of over 90% pure protein within 6 hours.
- Accelerate protein experiments by expressing and purifying up to 16 proteins simultaneously.
- The pre-installed protocols are optimized for protein expression and purification or nucleic acid extraction, for top-notch reproducibility.
- The compact footprint allows installation almost anywhere in the lab.
- The temperature-controlled heating block allows optimum reaction conditions for every type of experiment.
- The cooling block allows stable storage of the purified protein.

Patents

1. Korea patent no.10-2011-0041126 2. PCT application no. PCT/KR2011/003245

Specification

Dimensions (W X H X D)	320 mm x 500 mm x 535 mm
Weight	27 kg
Temperature range	15-30 °C
Humidity range	20 - 80%, no condensation
Operating system	Built-in
User interface	320 x 240 touch screen graphic LCD
Input voltage	100 - 240 VAC
Frequency	50 / 60 Hz
UV sterilization	5 minute cycle, 48.96 mJ/cm energy max 2
Power supply	24 VDC, 7.5 A(180 W)
Communications	TCP/IP
Heating block	30 - 90 °C
Cooling block	4 - 10 °C
Max. number of samples per run	1-16 samples per run
Reaction time	Protein expression & purification: ~ 6 hr/ Nucleic acid extraction: ~1 hr 30 min.

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