

sample prep

thermo
scientific

applied
biosystems

invitrogen



Nucleic acid purification solutions

Rock your prep with GeneJET kits

ThermoFisher
SCIENTIFIC

GeneJET kits—universal, reliable, affordable

As scientists ourselves, we understand your experimental needs, and we want to help you rock your prep. Thermo Scientific™ GeneJET™ nucleic acid purification kits offer superior reliability and affordability for purification of RNA, genomic DNA (gDNA), and plasmid DNA from a wide range of sources.

GeneJET kits use well-established silica membrane technology and undergo extensive testing to help ensure downstream compatibility.

- Isolate nucleic acids with superior purity and yields compared to other suppliers' kits
- Purified nucleic acids are ready to use in common downstream applications
- Trusted silica membrane technology in the form of a convenient spin column for purification of DNA and RNA
- GeneJET kits have been extensively tested on a wide variety of sample types and include specialized protocols

See the full range of products at thermofisher.com/genejet



See additional sample prep products at thermofisher.com/prepforsuccess

Get RNA and DNA in as little as 30 min

RNA

Thermo Scientific™ GeneJET™ purification kits for RNA offer a simple and efficient system for purification of total RNA from mammalian cultured cells, tissue, plant, bacteria, yeast, and fresh or stabilized blood.

Features

- Specialized and detailed protocols for different sample types
- Isolated RNA is essentially free of gDNA contamination; DNase treatment is not necessary
- Purified RNA can be used in a wide range of downstream applications

Range of samples that can be processed

- Mammalian cultured cells
- Tissue
- Human blood cells
- Bacteria
- Yeast
- Fresh whole blood
- Frozen blood
- Stabilized blood
- Plant-based samples
 - Leaves
 - Roots
 - Sprouts
 - Seeds

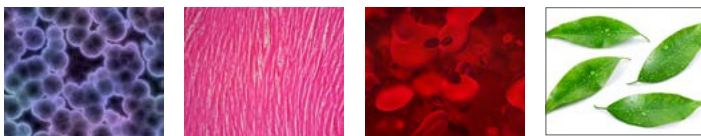


Figure 1. Variety of sample types that can be processed by the GeneJET purification kits.

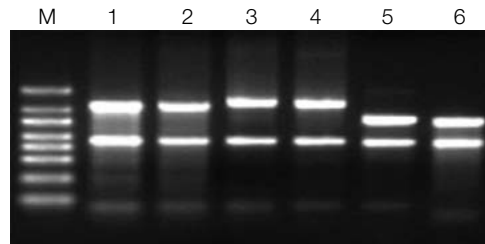


Figure 2. Total RNA from various sources purified using the Thermo Scientific™ GeneJET™ RNA Purification Kit. 1 µg isolated total RNA was analyzed by 1% agarose gel electrophoresis. M: Thermo Scientific™ RiboRuler™ High Range RNA Ladder (Cat. No. SM1821), 1: mouse liver, 2: mouse spleen, 3: HeLa cells, 4: Cos-7 cells, 5: *Saccharomyces cerevisiae*, 6: *E. coli* DH5a.

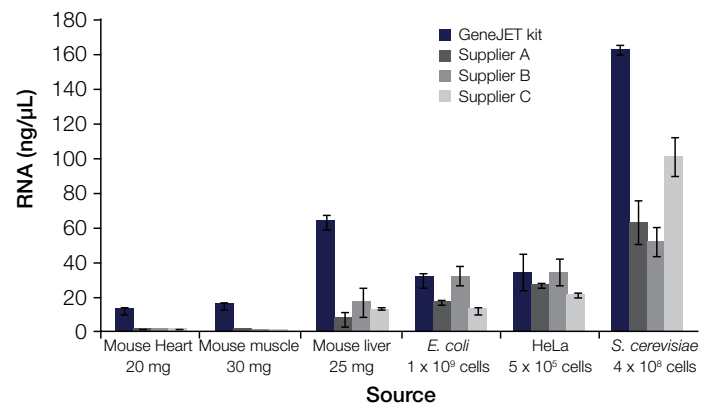


Figure 3. Yields of total RNA purified using the GeneJET RNA Purification Kit compared with other suppliers' kits.

Applications

- Real-time quantitative PCR (qPCR)
- Reverse transcription PCR (RT-PCR)
- cDNA library construction
- Northern blotting
- Nuclease protection assays
- Nucleic acid labeling

Check out the integrity of RNA isolated from blood samples at thermofisher.com/genejet

DNA

Thermo Scientific™ GeneJET™ purification kits for gDNA are designed for rapid and efficient purification of high-quality genomic DNA from various samples. The standard procedure takes less than 20 minutes following cell lysis and yields purified DNA greater than 30 kb in size.

For archived formalin-fixed, paraffin-embedded (FFPE) samples, the total procedure takes less than 2 hours, completely eliminating overnight incubation. Elimination of toxic reagents commonly used for deparaffinization (e.g., xylene) allows a safe DNA purification procedure with high DNA yields and excellent quality.

Features

- Rapid and efficient purification of high-quality gDNA
- Specialized and detailed protocols for different sample types
- Purified DNA is greater than 30 kb in size, including nuclear, mitochondrial, and chloroplast DNA
- Isolated DNA can be used directly in PCR, qPCR, Southern blotting, and enzymatic reactions

Range of samples that can be processed

- Mammalian cultured cells
- Tissue
- Human blood cells
- Bacteria
- Yeast
- Fresh whole blood
- Frozen blood
- Stabilized blood
- Plant-based samples
 - Leaves
 - Roots
 - Sprouts

Thermo Scientific™ GeneJET™ Viral DNA/RNA Purification Kit

Get fast and efficient viral nucleic acid purification from a wide range of sample types and a variety of viruses.

- Linear yields from a wide range of viral titers
- Suitable for serum, plasma, and cell-free liquids
- Tested with a variety of DNA and RNA viruses (HIV, HBV, HCV, HPV, CMV, EBV)
- Compatible with sensitive downstream assays such as RT-PCR and qPCR

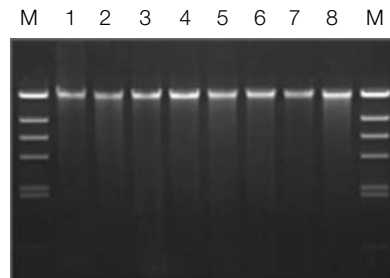


Figure 4. Genomic DNA from various sources purified using the Thermo Scientific™ GeneJET™ Genomic DNA Purification Kit.

150 ng of isolated genomic DNA from each source was fractionated by 0.5% agarose gel electrophoresis. M: Thermo Scientific™ Lambda DNA/HindIII Marker (Cat. No. SM0101), 1: human bone marrow, 2: human blood, 3: rat spleen, 4: mouse heart, 5: mouse liver, 6: HeLa cells, 7: Jurkat cells, 8: *E. coli* DH5α cells.

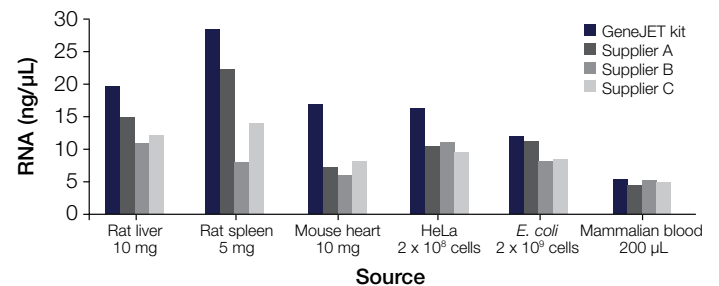


Figure 5. Yield of genomic DNA purified using GeneJET Genomic DNA Purification Kit and kits from other suppliers.

Applications

- Cloning
- PCR
- Real-time quantitative PCR (qPCR)
- Sequencing
- Southern blotting

Get plasmid in less than 60 min

Plasmid

Thermo Scientific™ GeneJET™ plasmid DNA purification kits provide high yields of highly concentrated, molecular-grade purified DNA.

Features

- **Efficient**—excellent yield of high-quality plasmid DNA
 - Mini scale: 20 µg from 1–5 mL culture
 - Midi scale: 200 µg from 50 mL culture
 - Maxi scale: 750 µg from 100–250 mL culture
- **Fast**—procedure takes less than 14 minutes (mini scale) and 60 minutes (midi or maxi scale)
- **Convenient**—no phenol/chloroform extraction or alcohol precipitation required
- **Pure**—purified DNA is immediately ready to use

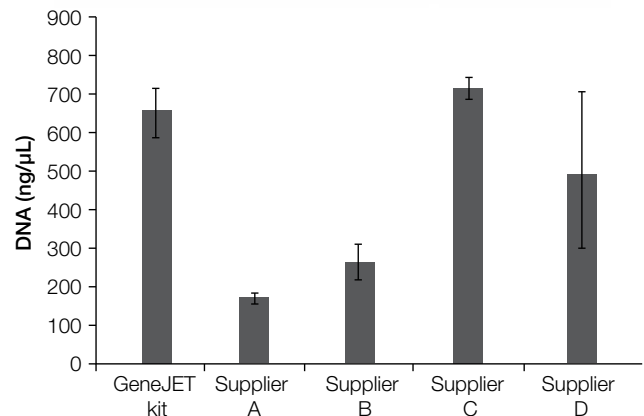


Figure 6. High concentration of plasmid purified with Thermo Scientific™ GeneJET™ Plasmid Midiprep Kit. Concentrations of eluted DNA were obtained after the purification of high-copy plasmid DNA using different kits for midi-scale plasmid DNA purification at maximal recommended bacterial cell culture volumes.

Applications

- Molecular cloning
- Sequencing
- PCR
- *In vitro* transcription
- Transformation

For transfection of mammalian cells, we recommend using Invitrogen™ PureLink™ plasmid kits.

Find out more at thermofisher.com/purelink

Cleanup and gel extraction

Effective fragment recovery from reaction mixtures or agarose gels using GeneJET kits.

- Effective removal of primers, dNTPs, unincorporated labeled nucleotides, enzymes, and salts from PCR and other reaction mixtures
- Rapid purification of DNA fragments from standard or low-melting point agarose gels run in either TAE or TBE buffer
- Fast and reliable cleanup and size selection from different reaction mixtures and buffers for next-generation sequencing (NGS) library preparation

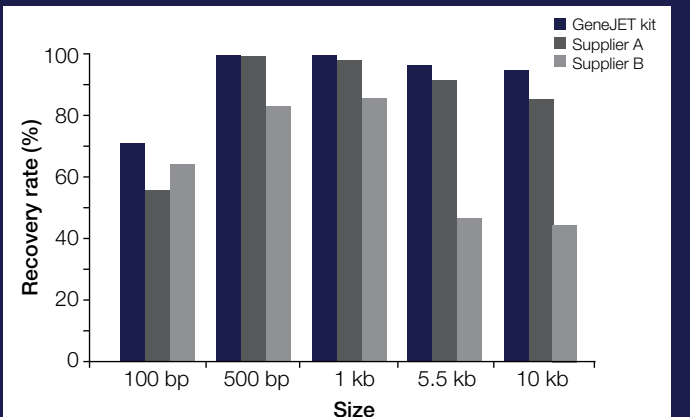


Figure 7. Superior purification of DNA fragments from PCR reaction mixture.

Ordering information

Product	Quantity	Cat. No.
GeneJET RNA purification kits		
GeneJET RNA Purification Kit	50 preps/250 preps	K0731/K0732
GeneJET Whole Blood RNA Purification Mini Kit	50 preps	K0761
GeneJET Plant RNA Purification Kit	50 preps/250 preps	K0801/K0802
GeneJET Stabilized and Fresh Whole Blood RNA Kit	50 preps	K0871
GeneJET DNA purification kits		
GeneJET Genomic DNA Purification Kit	50 preps/250 preps	K0721/K0722
GeneJET Whole Blood Genomic DNA Purification Mini Kit	50 preps/250 preps	K0781/K0782
GeneJET Plant Genomic DNA Purification Kit	50 preps/250 preps	K0791/K0792
GeneJET FFPE DNA Purification Kit	50 preps/250 preps	K0881/K0882
Viral RNA and DNA purification kits		
GeneJET Viral DNA/RNA Purification Kit	50 preps	K0821
GeneJET plasmid purification kits		
GeneJET Plasmid Miniprep Kit	50 preps/250 preps	K0502/K0503
GeneJET Plasmid Midiprep Kit	25 preps/100 preps	K0481/K0482
GeneJET Plasmid Maxiprep Kit	10 preps/25 preps	K0491/K0492
GeneJET DNA fragment purification kits		
GeneJET PCR Purification Kit	50 preps/250 preps	K0701/K0702
GeneJET Gel Extraction Kit	50 preps/250 preps	K0691/K0692
GeneJET NGS Cleanup Kit	50 preps/250 preps	K0851/K0852
GeneJET DNA/RNA cleanup and concentration micro kits		
GeneJET Gel Extraction and DNA Cleanup Micro Kit	50 prep/250 preps	K0831/K0832
GeneJET RNA Cleanup and Concentration Micro Kit	50 preps/250 preps	K0841/K0842

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Find out more at thermofisher.com/genejet

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