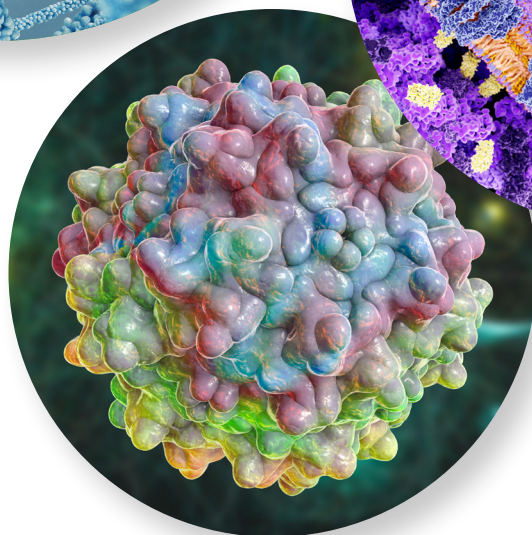
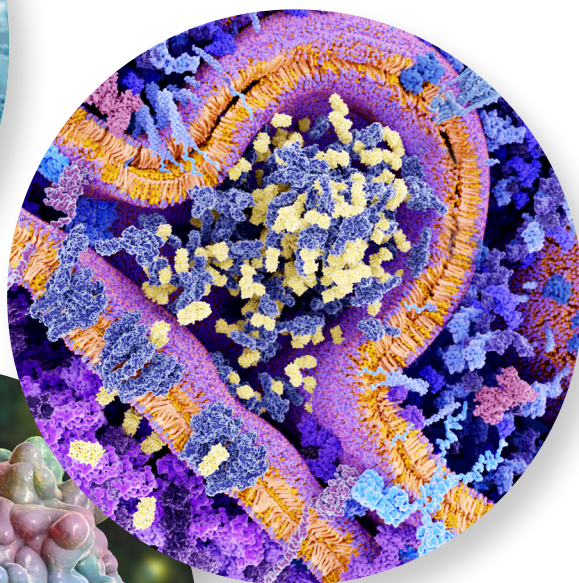
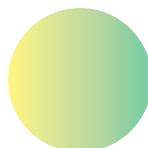
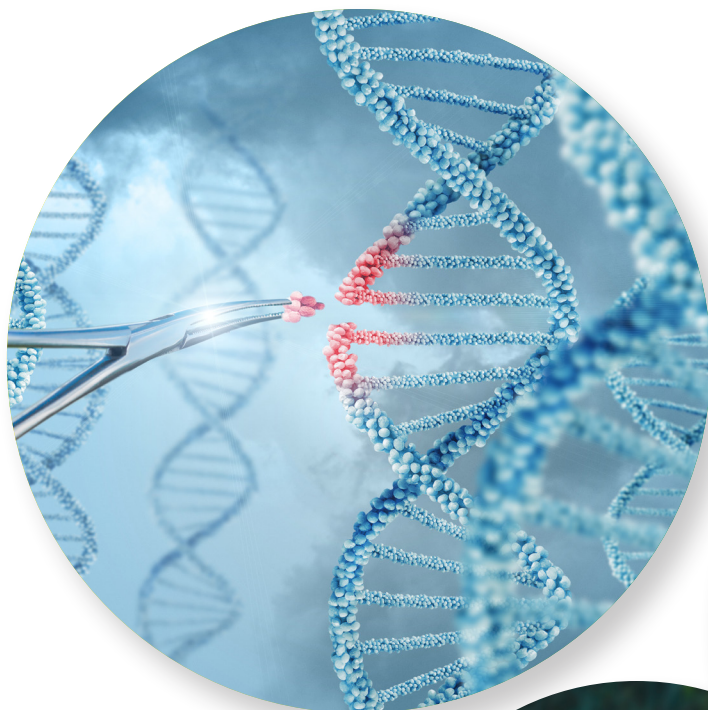




ZYMO RESEARCH

The Beauty of Science is to Make Things Simple®

Accelerate Your Molecular Therapeutic Discovery



Molecular Therapeutics Discovery

Molecular based therapeutic technologies offer many significant advantages over traditional pharmaceuticals. These benefits include faster development, highly specific gene/protein targeting, greater tunability, and even permanent integration into the patient's genome. Such attributes have brought molecular therapeutics to the forefront in the development of treatments for challenging illnesses, including cancer, neurodegeneration, hereditary and infectious diseases, and immune system disorders. Plasmid DNA has become a key element in molecular based therapies because of their ability to transfer and store genetic information, ease of DNA manipulation and propagation, and natural capacity to be taken up by a variety of cells. Plasmids can act as a direct vector for gene therapies or be used *in vitro* to create recombinant viral vectors, mRNA, and protein products. However, traditional cloning and plasmid purification workflows comprise of long and complicated techniques that are prone to inconsistency, making the development and testing of potential therapeutic candidates a long and arduous process.

Zymo Research strives to give researchers the best foundation possible for molecular therapeutic discovery through its collection of innovative products that provide fast, simple, and efficient solutions for cloning and plasmid purification. Our DNA clean-up and gel extraction kits utilize Zymo-Spin™ Technology, which has revolutionized the microcentrifuge column to ensure DNA purified from PCR and restriction digestions is ultra-pure and highly concentrated, making it ideal for cloning techniques such as Gibson and Golden Gate assembly. Zymo Research's patented ZymoPURE™ technology reduces the time it takes to purify endotoxin-free plasmid DNA by 9-fold and enables up to 3 mg of plasmid DNA to be eluted directly from a microcentrifuge column, providing a fast and simple solution for preparing plasmids for mammalian cell transfection. Our unique Mix & Go!™ competent *E. coli* streamlines the plasmid transformation process by eliminating the traditional heat-shock and long outgrowth steps without sacrificing transformation efficiency, enabling a more efficient and high-throughput approach to cloning.

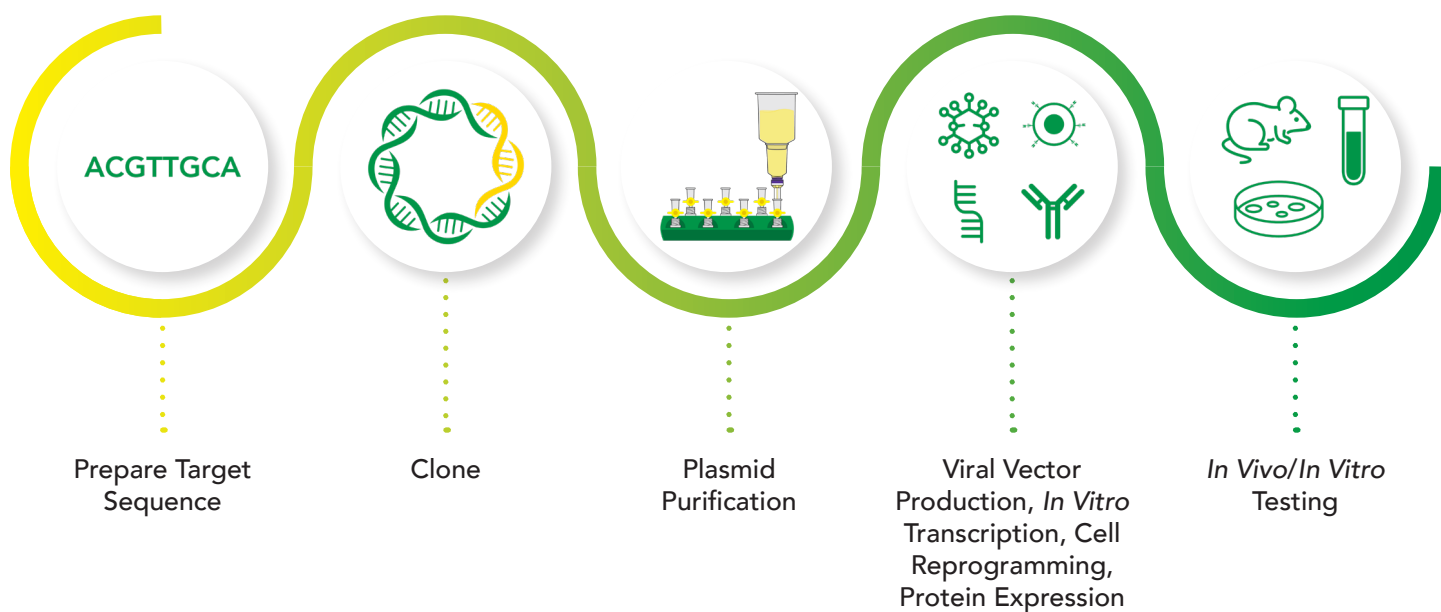


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DNA Clean-Up

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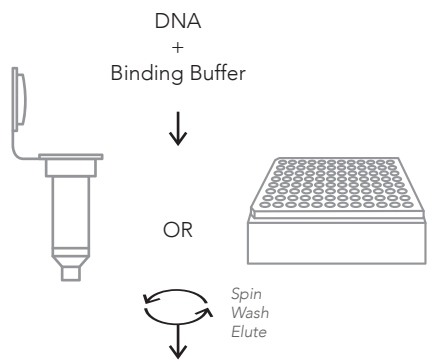
E. coli Transformation

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DNA Clean & Concentrator® Kits

- **Fast & Simple:** Clean and concentrate DNA in 2 minutes.
- **Highly Concentrated:** Elute in as little as 6 µl.
- **Ultra-Pure:** Ready for Next-Gen Sequencing, PCR, ligations, etc.

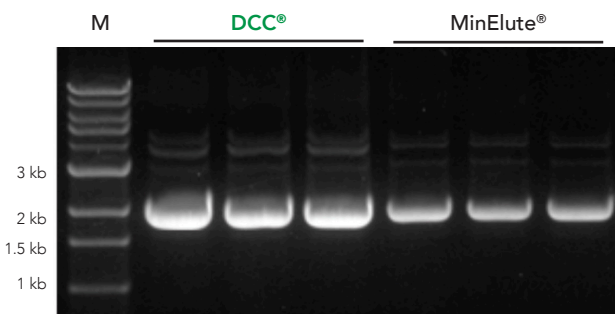
Simple, Innovative Workflow



Ultra-pure DNA for...

- ✓ Sequencing
- ✓ DNA Ligation
- ✓ Endonuclease Digestion, etc.

Recover Ultra-Pure, High-Quality DNA



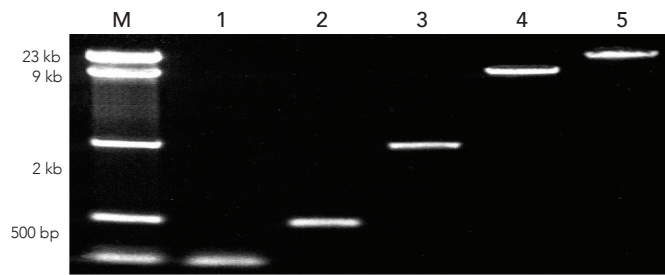
High efficiency DNA recovery using the DNA Clean & Concentrator®-5 (DCC®-5). Equivalent amounts of DNA were purified using the DCC®-5 or MinElute® Kit (Supplier Q) and analyzed by electrophoresis in a 0.8% (w/v) agarose/TAE/EtBr gel.

Product	Cat. No.	Size
DNA Clean & Concentrator® -5 (uncapped columns)	D4003	50 preps
	D4003T	10 preps
	D4004	200 preps
DNA Clean & Concentrator® -25 (uncapped columns)	D4005	50 preps
	D4006	200 preps
ZR-96 DNA Clean & Concentrator®-5	D4023	2 x 96 preps
	D4024	4 x 96 preps
Genomic DNA Clean & Concentrator®-10	D4010	25 preps
	D4011	100 preps
Genomic DNA Clean & Concentrator®-25	D4064	25 preps
	D4065	100 preps
ZR-96 Genomic DNA Clean & Concentrator®-5	D4066	2 x 96 preps
	D4067	4 x 96 preps
DNA Clean & Concentrator® MagBead	D4012	1 x 96 preps

Zymoclean™ Gel DNA Recovery Kits

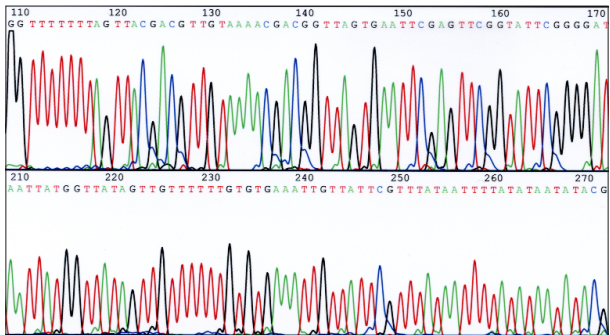
- **Superior Yields:** Recover 80% of DNA from agarose gels.
- **Highly Concentrated:** Elute in as little as 6 µl.
- **Ultra-Pure:** Ready for Next-Gen Sequencing, PCR, ligations, etc.

Boost Recoveries from Agarose Gels to > 80%



DNA fragments recovered from an agarose gel using the Zymoclean™ Gel DNA Recovery Kit. Lanes: M: DNA Ladder; 1-5: individual ladder DNA fragments.

Recover Sequencing-ready DNA



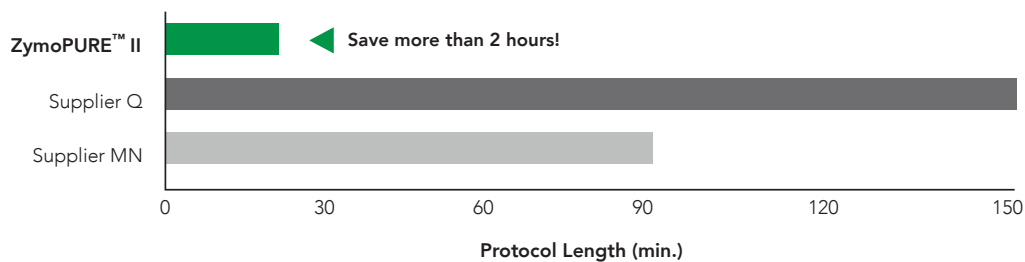
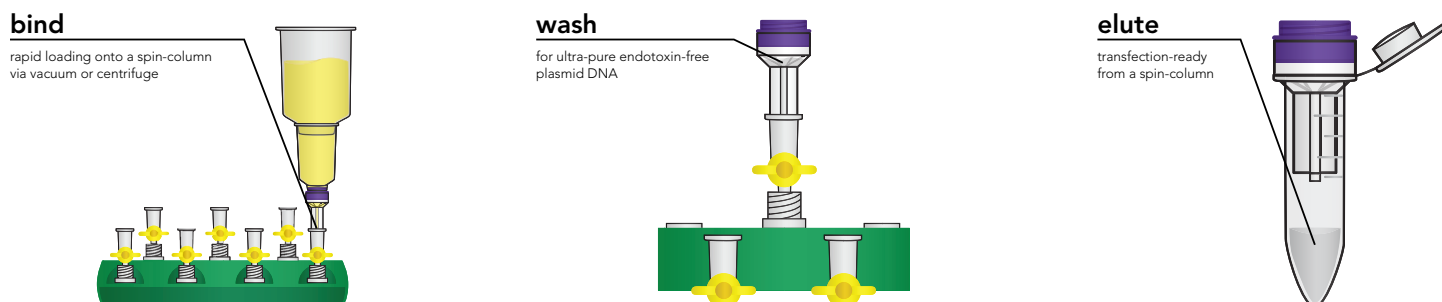
DNA sequencing chromatogram of a PCR product recovered using the Zymoclean™ Gel DNA Recovery Kit. DNA was recovered from a 2% (w/v) agarose gel and used directly for sequencing.

Product	Cat. No.	Size
Zymoclean™ Gel DNA Recovery Kit (uncapped columns)	D4001	50 preps
	D4001T	10 preps
	D4002	200 preps
Zymoclean™ Gel DNA Recovery Kit (capped columns)	D4007	50 preps
	D4008	200 preps
Zymoclean™ Large Fragment DNA Recovery Kit	D4045	25 preps
	D4046	100 preps

ZymoPURE™ II Plasmid Purification Kits

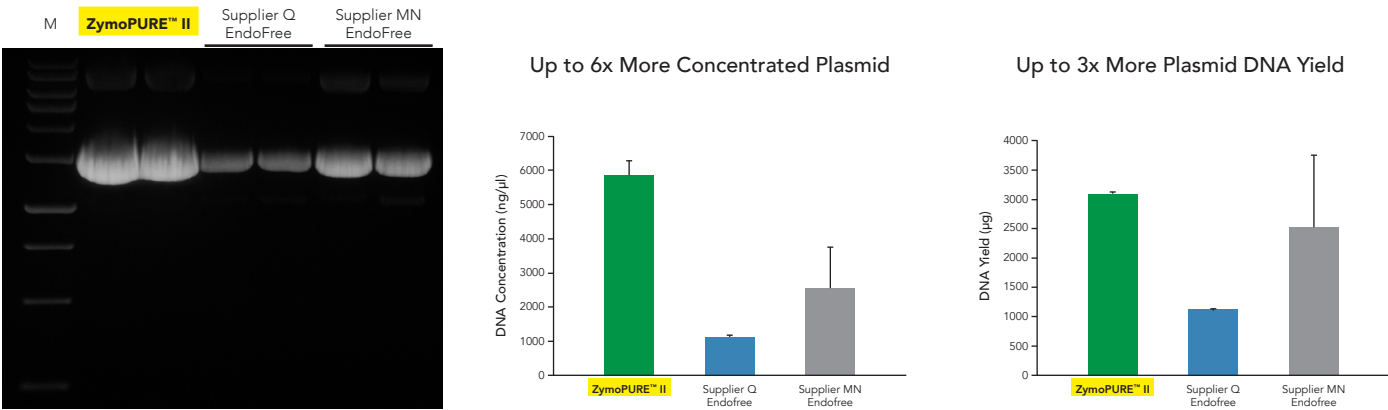
- **Fastest** : Simple 16-minute Midi/Maxi preps.
- **Highest Yield**: Up to 3 mg from a Spin-Column.
- **Ultra-Pure**: Endotoxin-Free and Transfection Ready.

Perform Transfection-Ready Midi & Maxi preps in Only 16 Minutes



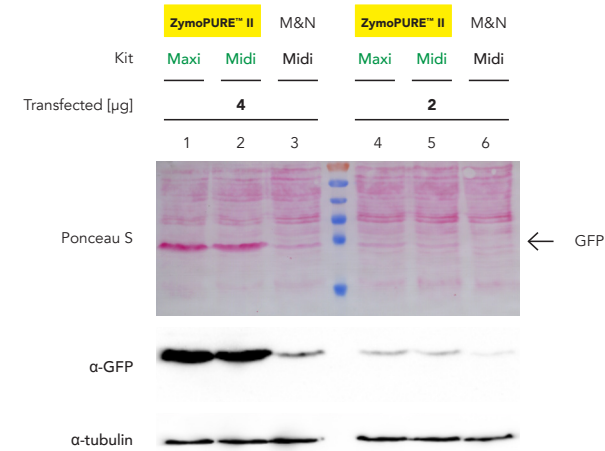
Our patented ZymoPURE™ plasmid purification system features a novel binding chemistry and EZ-Flow™ Spin-Column design that enables simple purification of transfection-ready plasmid DNA up to 9x faster using a vacuum manifold or centrifuge. No gravity flow columns or tedious alcohol precipitation steps are required.

Consistent Highly Concentrated Transfection Grade Plasmid



Yield and concentration for plasmid DNA isolated using the ZymoPURE™ II Maxiprep kit compared to two endotoxin-free kits from Supplier Q and Supplier MN. Plasmid DNA (pGL3®) was isolated from 150 ml of JM109 *E. coli* culture grown overnight following the manufacturer's suggested protocol (in duplicate). One (1) μl of eluted plasmid DNA was visualized post agarose gel electrophoresis. M, ZR 1 kb DNA Marker (Zymo Research).

Dependable Purification of Transfection Grade Plasmid



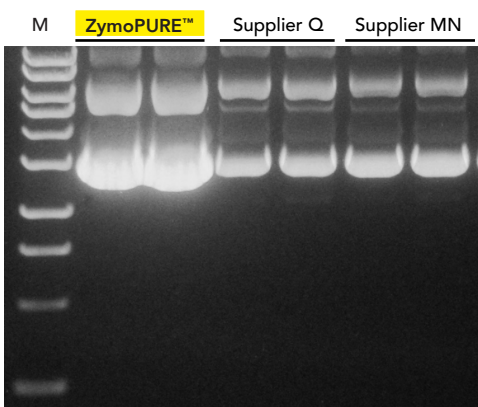
Plasmid DNA prepared with ZymoPURE Kits exhibit superior transfection efficiency. HeLa Cells seeded in a 6-well plate were transfected with either 2 or 4 μg of pCI-neo®+GFP plasmid isolated from 100 ml of bacteria culture using the ZymoPURE Midiprep Kit, ZymoPURE Maxiprep Kit, or MN Midiprep Kit. GFP expressin was assessed 48 hours later in cell lysates using western blot and Ponceau S staining. The blot was also probed with an antibody against alpha-Tubulin in order to verify equal loading samples. **Data generated by V.B. at University of Cologne.**

Product	Cat. No.	Size	Processing Time	Culture Volume	Minimum Elution Volume	Maximum Plasmid Yield	Endotoxins
ZymoPURE™ II Plasmid Midiprep Kit	D4200 D4201	25 preps 50 preps	≤ 18 minutes	50 ml	≥ 150 μl	1.2 mg	≤ 0.025 EU/μg
ZymoPURE™ II Plasmid Maxiprep Kit	D4202 D4203	10 preps 20 preps	≤ 18 minutes	150 ml	≥ 300 μl	3.0 mg	≤ 0.025 EU/μg
ZymoPURE™ II Plasmid Gigaprep Kit	D4204	5 preps	≤ 45 minutes	2.5 L	≥ 3 ml	25 mg	≤ 0.025 EU/μg

ZymoPURE™ Plasmid Miniprep Kit

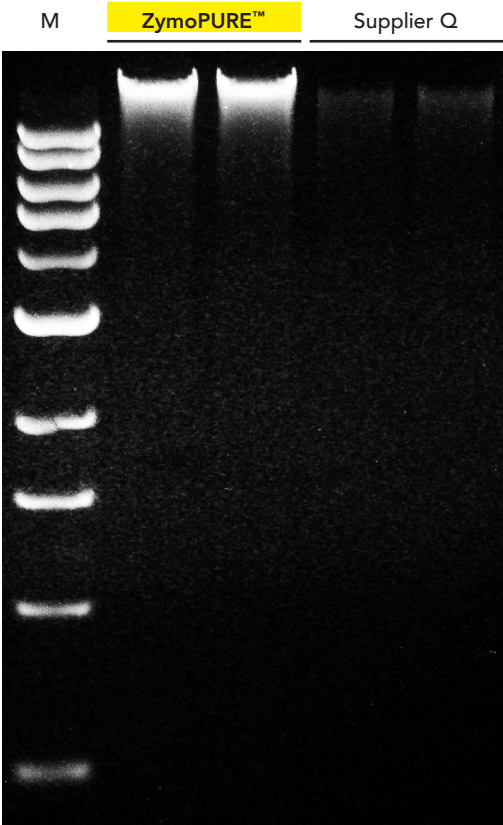
- **Highest Yield:** Purify up to 100 µg of plasmid DNA in as little as 25 µl directly from a spin-column.
- **Transfection-Grade:** 50,000 times fewer endotoxins than industry leading minipreps.
- **BAC/YAC/PAC Ready:** Purify DNA up to ~200 kb.

Superior Yields



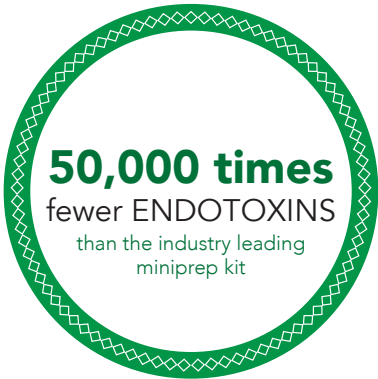
Plasmid DNA yield and concentration from the ZymoPure™ Miniprep Kit compared to other major suppliers. Plasmid DNA (pGL3®) was isolated from 5 ml of JM109 *E. coli* culture grown overnight following the manufacturer's suggested protocol (in duplicate). The size marker "M" is a 1 kb ladder.

BAC/YAC/PAC Ready



BAC DNA yield and concentration from the ZymoPURE™ Miniprep Kit compared a Supplier Q kit. A BAC clone (~190 kb) from a RPC1-11 human BAC library (CHORI) was purified from 5 ml of DH10B *E. coli* cultures grown in duplicate overnight following the manufacturer's suggested protocol. The size marker "M" is a 1 kb ladder.

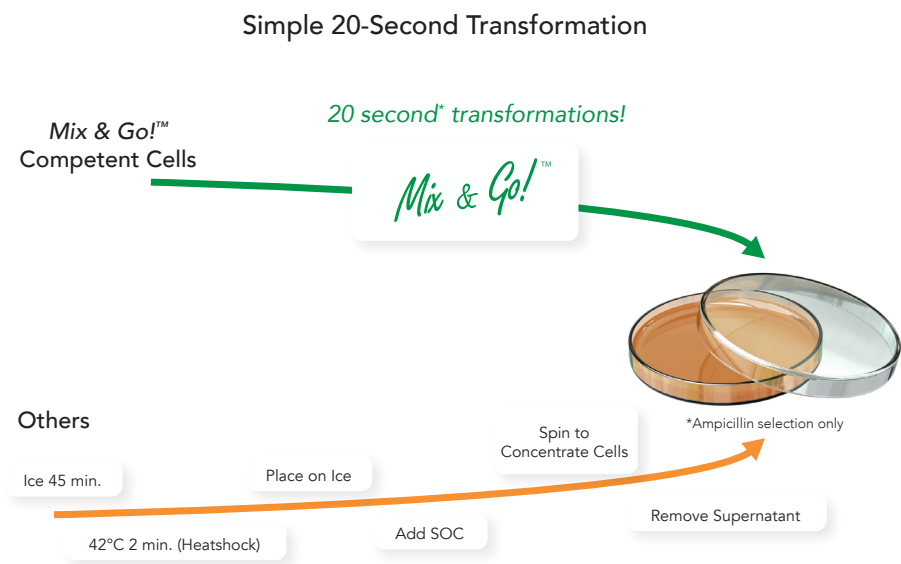
Transfection-grade



Product	Cat. No.	Size	Processing Time	Culture Volume	Elution Volume	Plasmid Yield	Endotoxins
ZymoPURE™ Plasmid Miniprep Kit	D4208T	10 preps	≤ 15 minutes	≤ 5 ml	≥ 25 µl	≤ 100 µg	≤ 1 EU/µg DNA
	D4209	50 preps					
	D4210	100 preps					
	D4211	400 preps					
	D4212	800 preps					

Mix & Go!™ Competent Cells

- **Simple 20 Second Transformation:** No heat shock! Just add DNA and spread on a plate.
- **High Transformation Efficiencies:** Achieve $10^8 - 10^9$ transformants per μg of plasmid DNA.
- **Versatile:** Excellent for general cloning, blue-white screening, and plasmid isolation.
- **Prepare Your Own:** Easy 3 step protocol to produce reliable chemically competent E. coli in ≤ 45 minutes.



Product	Cat. No.	Size	Uses
Mix & Go!™ E. coli Transformation Kit	T3001	up to 20 ml	Preparation of competent E. coli
Mix & Go!™ E. coli Transformation Buffer Set	T3002	up to 60 ml	Preparation of competent E. coli

Strain	Cat. No.	Size
JM109	T3003	10 x 100 μl aliquots (10 tubes)
	T3005	96 x 50 μl aliquots (12 x 8-tube strips)
DH5 Alpha	T3007	10 x 100 μl aliquots (10 tubes)
	T3009	96 x 50 μl aliquots (12 x 8-tube strips)
	T3010	96 x 50 μl aliquots (PCR plate)
HB101	T3011	10 x 100 μl aliquots (10 tubes)
	T3013	96 x 50 μl aliquots (12 x 8-tube strips)
TG1	T3017	10 x 100 μl aliquots (10 tubes)
Zymo 10B	T3019	10 x 100 μl aliquots (10 tubes)
	T3020	96 x 50 μl aliquots (12 x 8-tube strips)

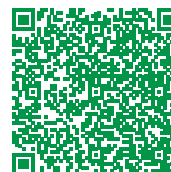
Product Guide: *Mix & Go!*[™] Competent *E. coli*

	JM109	DH5 Alpha	HB101	TG1	Zymo 10B
Specifications					
Strain Background	K-12	K-12	K-12	K-12	K-12
General Cloning	✓	✓	✓	✓	✓
Plasmid Isolation	✓	✓	✓	✓	✓
Recombinant Protein Expression	✓				
Production of ssDNA (F'episome)	✓			✓	
Suppression of Amber Mutations (glnV44 or supE44)	✓	✓	✓	✓	
Blue-White Selection (lacZΔM15)	✓	✓		✓	✓
High-quality and Yield of Plasmid DNA (endA1)	✓	✓			✓
Reduced Recombination & Insert Stability (recA1 or recA13)	✓	✓	✓		✓
Plasmid Size	Up to 10-15 kb		Up to 10-15 kb	Up to 10-15 kb	
Transformation of Large Plasmids (deoR)		Up to 20-32 kb			Up to 20-32 kb
Ampicillin Resistant (bla or ampR)					
Chloramphenicol Resistant (cat or CmR or CamR)					
Tetracycline Resistant (Tn10 or tetR)					
Kanamycin Resistant (KanR)					
Nalidixic Acid Resistant (gyrA96 or NalR)	✓	✓			
Streptomycin Resistant (StrR)			✓		✓
Genotype	F'[traD36 proA+B+ lacIq Δ(lacZ)M15] Δ(lac-proAB) glnV44 (supE44) e14- (McrA-) thi gyrA96 (NalR) endA1 hsdR17(rk-mk+) relA1 recA1	F- φ80lacZΔM15 Δ(lacZYA-argF)U169 deoR nupG recA1 endA1 hsdR17(rk-mK+) phoA glnV44 (supE44) thi-1 gyrA96 relA1, λ-	F- Δ(gpt-proA)62 leuB6 glnV44 (supE44) ara-14 galK2 lacY1 Δ(mcrC-mrr) xyl-5 mtl-1 recA13 thi-1 rpsL20 (SmR)	F'[traD36 lacIq Δ(lacZ) M15 proA+B+] glnV (supE) thi-1 Δ(mcrB-hsdSM)5 (rK- mK- McrB-) thi Δ(lac-proAB)	F- mcrA Δ(mrr-hsdRMS-mcrBC) φ80lacZΔM15 ΔlacX74 recA1 endA1 araD139 Δ(ara leu) 7697 galU galK rpsL nupG λ-
Catalog Number	T3003	T3007	T3011	T3017	T3019

Complete Your Molecular Therapeutic Discovery Workflow

Rapid Purification of High-Quality Genomic DNA

Quick-DNA™ Kits	Cat. No.	Size
Quick-DNA™ Miniprep Plus Kit	D4068T	10 preps
	D4068	50 preps
	D4069	200 preps
Quick-DNA™ Funga/Bacterial Miniprep Kit	D6005	50 preps



Isolate Total RNA from a Variety of Sample Types

Quick-RNA™ Kits	Cat. No.	Size
Quick-RNA™ Miniprep Plus	R1057T	10 preps
	R1057	50 preps
	R1058	200 preps
Quick-RNA™ Fungal/Bacterial Miniprep Kit	R2014	50 preps



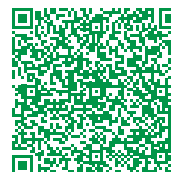
Simple Small-Scale Protein Purification

Zymo-Spin™ Protein Purification Kits	Cat. No.	Size
His-Spin Protein Miniprep Kit	P2001	10 preps
	P2002	50 preps
Strep-Spin Protein Miniprep Kit	P2004	10 preps
	P2005	50 preps
MBP-Spin Protein Miniprep Kit	P2006	10 preps
	P2007	50 preps



Quick & Easy Solutions for RNA Clean-Up

RNA Clean & Concentrator™ Kits	Cat. No.	Size
RNA Clean & Concentrator™-5 (DNase Included)	R1013	50 preps
	R1014	200 preps
RNA Clean & Concentrator™-25	R1017	50 preps
	R1018	100 preps
RNA Clean & Concentrator™-96	R1080	2 x 96 preps



Innovative Products for Yeast

Transformation & Plasmid Prep Kits	Cat. No.	Size
Zymolyase	E1004	1000 U
	E1005	2000 U
Zytoprep™ Yeast Plasmid Miniprep II	D2004	50 preps
Frozen-EZ Yeast Transformation II™ Kit	T2001	120 rxns





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Cat. No. B1021 Version 01

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