Flexible Plasmid Extraction
— All-in-One Solution from Mini to Maxi

- Plasmid Mini Kit: Quickly extract 20–50 μg of high-purity plasmid DNA from 1–10 mL *E. coli* LB culture. Residual endotoxin is extremely low (<0.1 EU/μg DNA).
- Plasmid Maxi Kit: Extract 0.5–2 mg of high-copy plasmid DNA from 150–300 mL *E. coli* LB culture with yields up to 80–90%. Residual endotoxin remains ultra-low (<0.1 EU/μg DNA).

Feature	Traditional Plasmid Prep	Low-Endotoxin Plasmid Prep
Endotoxin level	Often >5 EU/μg	Ultra-low, safe for sensitive cells
Workflow	Complex, time-consuming	Streamlined, ~30 minutes
Cell impact	Can cause apoptosis, stress responses, false positives	Reliable transfection and stable cell performance
Applications	General cloning	Stem cell transfection, viral vector packaging, gene therapy

Features

Flexible Options	Choose Mini, Midi, or Maxi kits to match your workflow.
Wide Sample Range	Supports small- to large-scale bacterial cultures(2–300 mL).
High DNA Purity	Free from protein and RNA; ready for digestion, transformation, sequencing, and sensitive applications.
High Yield	Mini kits up to 50 μg; Midi/Maxi kits up to 4 mg plasmid DNA.
Ultra-Low Endotoxin	<0.01 EU/μg for mid-to-high copy plasmids, much lower than conventional methods.
Easy Operation	Push-filter design simplifies handling; compatible with various rotor types.

Performance

1.Plasmid Miniprep Kit

(A).High Yields

Sample No.	Kit	Concentration (ng/μL, Qubit)	Concentration (ng/μL, Nanodrop)	$A_{260/280}$	$A_{260/230}$
1	Supplier F*	29.6	72.836	1.948	2.335
2		32.4	81.289	1.941	2.349
3	Yeasen-19001	74.8	184.149	1.938	2.335
4		78.2	171.941	1.925	2.318
5	Supplier M*	69.6	141.349	1.877	2.32
6		52.8	134.178	1.882	2.325

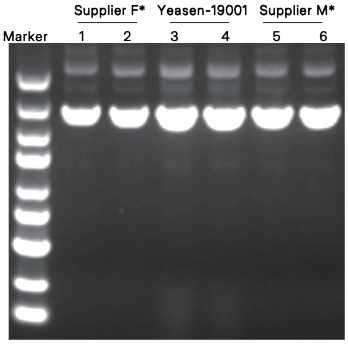

Figure 1. Comparison of Plasmid DNA Yields from Equal Volumes of Bacterial Culture

Plasmid yield: Yeasen-19001 > Supplier M* > Supplier F*.

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Y0030-V1

Free Sample

(B).High Quality with Ultra-low Endotoxin

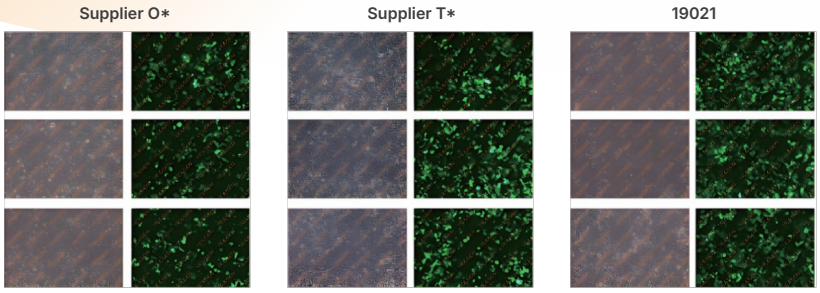


Figure 2. Transfection efficiency of plasmid DNA extracted using Yeasen 19021, Supplier O*, and Supplier T* kits.

HEK293 cells were transfected with pEGFP-C1, and bright-field and green fluorescence images were captured 72 hours post-transfection. Fluorescence intensity indicates transfection efficiency in the order: Yeasen 19021 > Supplier T* > Supplier O*.

2.Plasmid Maxiprep Kit

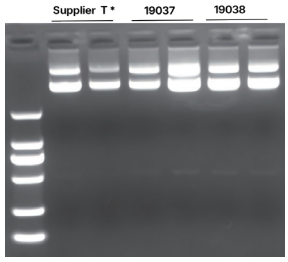
(A). Higher Plasmid Yield and Purity

Kit	Concentration (ng/μL)	First Elution Volume (mL)	Yield 1st Elution (μg)	Yield 2nd Elution (μg)	1st Elution Recovery Rate	$A_{260/280}$	$A_{260/230}$
Supplier A*	853.0	1.03	879	1068	82.30%	1.81	2.29
Supplier A*	631.6	1.00	630	739	85.24%	1.81	2.26
19038ES	942.9	1.07	1005	1189	84.53%	1.84	2.41
19038ES	928.8	1.06	983	1161	84.66%	1.84	2.41

Result: The Hieff™ Pro Endo-free Plasmid Maxi Kit (19038ES) achieved 1.26× higher plasmid yield compared with Supplier A*, while maintaining comparable purity.

(B). Lower Endotoxin Residual

Kit	Endotoxin Residual	Kit	Endotoxin Residual
Supplier A*	~0.1 EU/μg	19038ES	<0.01 EU/μg
Supplier A*	~0.1 EU/μg	19038ES	<0.01 EU/μg
19037ES	~0.5 EU/μg		
19037ES	~0.5 EU/μg		



Result: The 19038ES kit consistently delivered plasmid DNA with endotoxin levels below 0.01 EU/μg, significantly lower than Supplier A*.

Customer Feedback

From 200 mL bacterial culture, up to 1.8 mg plasmid DNA was recovered with excellent purity and ultra-low endotoxin, fully meeting daily transfection needs.

User-friendly workflow – the push-column filter allows easy removal of bacterial debris with a single pull.

Kit	Concentration (ng/μL)	Yield (μg)	$A_{260/280}$	$A_{260/230}$	Endotoxin Residual
Supplier B*	943.5	1415.3	1.83	2.21	~0.5 EU/μg
Supplier B*	852.5	1278.8	1.84	2.23	~0.5 EU/μg
19038ES	1221.4	1832.0	1.82	2.33	<0.1 EU/μg
19038ES	1264.1	1896.2	1.82	2.30	<0.1 EU/μg

Result: Compared to Supplier B*, the 19038ES kit yielded higher DNA concentrations and lower endotoxin levels (<0.1 EU/μg vs ~0.5 EU/μg), ensuring superior plasmid quality for sensitive applications such as stem cell transfection and viral packaging.

Ordering Information

Catgory	Name	Cat. No.	Size
Plasmid miniprep	Heiff™ Plasmid Mini Kit Hieff™ Endo-free Plasmid Mini Kit	19001ES50/70 19021ES50/70	50 T/200 T 50 T/200 T
Plasmid midiprep	Hieff™ Endo-free Plasmid Mini-Midi Kit Hieff™ Endo-free Plasmid Midi Kit	19022ES08/50/70 19023ES02/20	8 T/50 T/200 T 2 T/20 T
Plasmid maxiprep	Hieff™ Endo-free Plasmid Maxi Kit V2 Hieff™ Pro Endo-free Plasmid Maxi Kit	19037ES02/10 19038ES02/10	2 T/10 T 2 T/10 T

Citations & References

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[2]Hei H, Gao J, Dong J, et al. BK Knockout by TALEN-Mediated Gene Targeting in Osteoblasts: KCNMA1 Determines the Proliferation and Differentiation of Osteoblasts. *Mol Cells*. 2016;39(7):530-535. doi:10.14348/molcells.2016.0033(IF:2.670)

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