

# Migrate to Monarch.™



## Monarch Plasmid Miniprep Kit

Purifying high quality plasmid DNA can be challenging. From carryover contamination to the risk of using incorrect buffers, these bottlenecks can significantly impact your process efficiency.

The Monarch Plasmid Miniprep Kit provides a fast and reliable method for the purification of high quality plasmid DNA. Employing standard cell resuspension, alkaline lysis, and neutralization steps, our kit has the additional benefit of color indicators at certain steps to easily monitor completion.

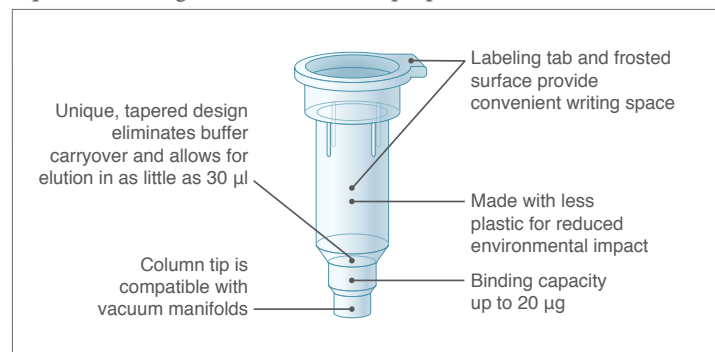
Unlike the market-leading kit, our user-friendly protocols have seven minutes less spin and incubation time. And with our optimized column design, you can elute in smaller volumes, eliminate buffer retention and minimize the risk of carryover contamination.

This kit uses significantly less plastic and responsibly-sourced, recyclable packaging, so you can feel good about choosing Monarch for your DNA purification.

### Benefits

- Elute in as little as 30  $\mu$ l
- Eliminate buffer retention and salt carryover with optimized column design
- Easily label columns using tab and frosted surfaces
- Reduce processing time with faster protocols
- Monitor completion of certain steps and easily identify buffers with colored buffer system
- No need to add RNase before starting
- Reduce your impact on the environment – Monarch kits use less plastic and responsibly-sourced, recyclable packaging

### Optimized design of Monarch Miniprep Columns



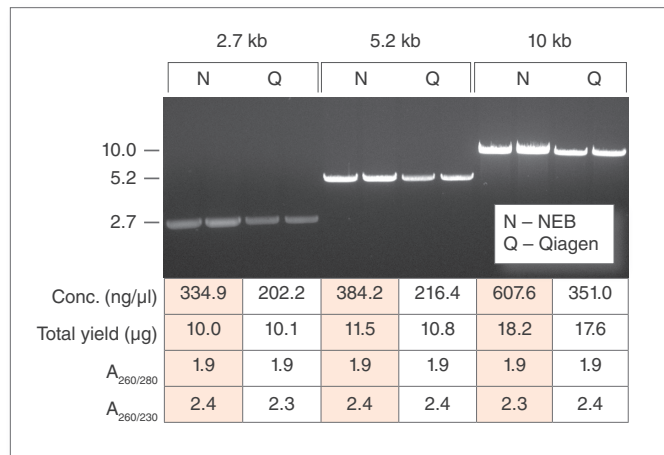
For more information and to request a sample, visit [NEBMonarch.com](http://NEBMonarch.com).



be INSPIRED  
drive DISCOVERY  
stay GENUINE

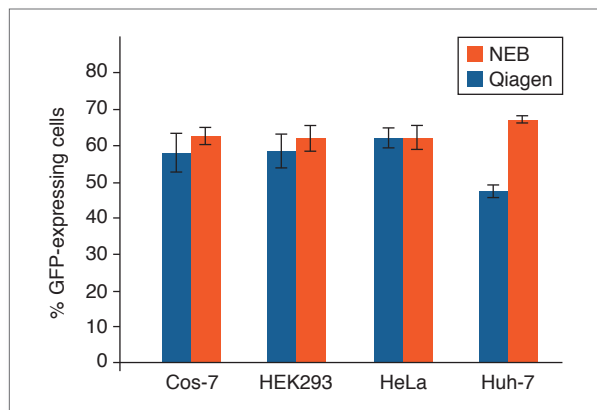
# Monarch Plasmid DNA Miniprep Kit

Monarch Plasmid Miniprep Kits consistently produce more concentrated plasmid DNA with equivalent yield, purity and functionality as compared to the leading supplier



Preps were performed according to recommended protocols using 1.5 ml aliquots of the same overnight culture. One microliter of each prep was digested with HindIII-HF® (NEB #R3104) to linearize the vector and the digests were resolved on a 1% w/v agarose gel.

Plasmid DNA purified using the Monarch Plasmid Miniprep Kit produces transfection efficiencies equivalent to or better than plasmid DNA purified using the Qiagen QIAprep® Spin Miniprep Kit



Plasmid DNA encoding constitutively expressed GFP (pEGFP-C2) was prepared using either Monarch Plasmid Miniprep Kit or Qiagen QIAprep Spin Miniprep Kit. Four different cell lines (Cos-7, HEK293, HeLa, and Huh-7) were grown to 80-90% confluence and transfected with 100 ng of each plasmid, in complex with 0.3 μl Lipofectamine 2000, and 10 ul Opti-MEM. Five replicates for each cell type were performed using both DNA preps. GFP expressing cells were counted by flow cytometry 48 hrs post-transfection with a minimum of 2000 events collected per well. Average percentage of cells expressing GFP from all replicates is graphed and used as a measure of transfection efficiency.

## Ordering Information

| PRODUCT                                    | NEB #    | SIZE         |
|--|----------|--------------|
| Monarch Plasmid Miniprep Kit               | T1010S/L | 50/250 preps |
| <b>COLUMNS AVAILABLE SEPARATELY</b>        |          |              |
| Monarch Plasmid Miniprep Columns           | T1017L   | 100 columns  |
| <b>BUFFERS AVAILABLE SEPARATELY</b>        |          |              |
| Monarch DNA Elution Buffer                 | T1016L   | 25 ml        |
| Monarch Plasmid Lysis Buffer (B2)          | T1012L   | 2 x 27 ml    |
| Monarch Plasmid Neutralization Buffer (B3) | T1013L   | 110 ml       |
| Monarch Plasmid Resuspension Buffer (B1)   | T1011L   | 55 ml        |
| Monarch Plasmid Wash Buffer 1              | T1014L   | 2 x 27 ml    |
| Monarch Plasmid Wash Buffer 2              | T1015L   | 30 ml        |

NEW ENGLAND BIOLABS®, NEB® and HF® are registered trademarks of New England Biolabs, Inc. MONARCH™ is a trademark of New England Biolabs, Inc. QIAGEN®, QIAQUICK®, QIAPREP® and MINELUTE® are registered trademarks of Qiagen Group. LIPOFECTAMINE™ and NANODROP™ are trademarks of Thermo Fisher Scientific.

## Specifications

- **Culture Volume:** 1–5 ml
- **Binding Capacity:** up to 20 μg
- **Plasmid Size:** up to 25 kb
- **Typical Recovery:** up to 20 μg. Yield depends on plasmid copy number, host strain, culture volume, and growth conditions
- **Elution Volume:** ≥ 30 μl
- **Purity:** A<sub>260/280</sub> and A<sub>260/230</sub> ≥ 1.8
- **Protocol Time:** 10½ minutes of spin and incubation time
- **Compatible Downstream Applications:** restriction digestion and other enzymatic manipulations, transformation, transfection of robust cells, DNA sequencing, PCR, labeling, cell-free protein synthesis, etc.



[www.neb.com](http://www.neb.com)

New England Biolabs, Inc., 240 County Road, Ipswich, MA 01938-2723 Telephone: (978) 927-5054  
Toll Free: (USA Orders) 1-800-632-5227 (USA Tech) 1-800-632-7799 Fax: (978) 921-1350 e-mail: [info@neb.com](mailto:info@neb.com)