Monarch® Nucleic Acid Purification

NOW AVAILABLE AT MEDSTORE

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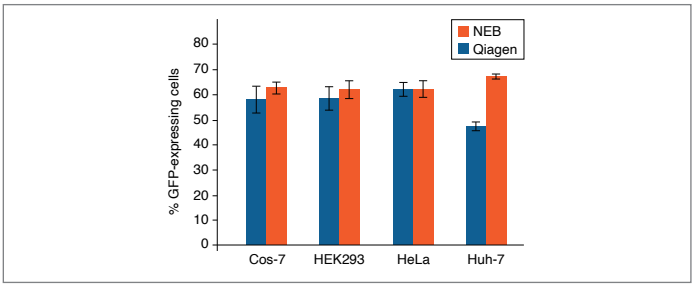
Monarch® Plasmid Miniprep Kit		Monarch® DNA Gel Extraction Kit		Monarch® PCR & DNA Cleanup Kit (5 µg)	
#T1010S - 50 preps	#T1010L - 250 preps	#T1020S - 50 preps	#T1020L - 250 preps	#T1030S - 50 preps	#T1030L - 250 preps
~~$104~~ $72.79	~~$433~~ $303.10	~~$131~~ $91.70	~~$598~~ $418.60	~~$131~~ $91.70	~~$598~~ $418.60

Monarch® Plasmid Miniprep Kit

TIPS FOR SUCCESSFUL MINIPREPS:

1. **Don't use too many cells (culture should not exceed 15 O.D. units):** Using the optimal amount of cells increases lysis efficiency and ensures that excess cell debris does not clog the column.
2. **Lyse cells completely:** In order to release all plasmid DNA, ALL of the cells need to be lysed. Resuspend cells completely, and incubate for the recommended time.
3. **Don't vortex cells after lysis:** Vortexing can cause shearing of host chromosomal DNA, resulting in gDNA contamination.
4. **Allow the RNase to do its job:** Do not skip or reduce the incubation with RNase (which is included in the neutralization buffer), otherwise you may observe RNA contamination.
5. **Don't skip any washes:** Proper washes ensure the removal of cell debris, endotoxins and salts.
6. **Heat the elution buffer for large plasmids:** Large DNA binds more tightly; heating the elution buffer helps to more efficiently release the DNA from the column matrix.

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 µl 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.

Designed for sustainability – Monarch kits*…

**Visit NEBMonarchPackaging.com for details.*

Monarch® Kits for your DNA Cleanup and Gel Extraction Needs

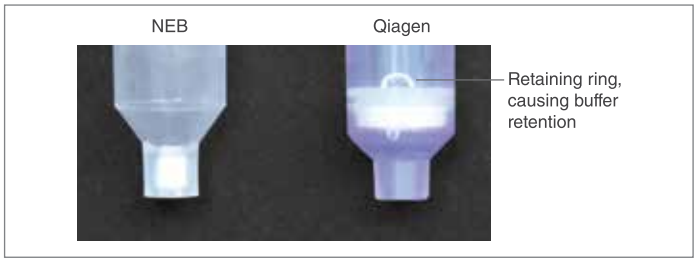
Monarch DNA cleanup kits rapidly and reliably purify up to 5 µg of concentrated, high-quality DNA. These kits utilize a bind/wash/elute workflow with minimal incubation and spin times. The columns provided with each kit ensure zero buffer retention and no carryover of contaminants, enabling elution of sample in volumes as low as 6 µl. Monarch Buffers have been optimized, and do not require monitoring of pH. Eluted DNA is ready for use in restriction digests, DNA sequencing, ligation and other enzymatic manipulations.

- Monarch® DNA Gel Extraction Kit
- Monarch® PCR & DNA Cleanup Kit (5 µg)

TIPS FOR SUCCESSFUL GEL EXTRACTIONS:

1. **Use the smallest possible agarose plug:** The less agarose in solution, the more efficient the extraction will be. More agarose means more melting time and more buffer needed to dissolve it (introducing more salts which can co-elute with your sample). If the plug is greater than 160 mg, the volume of agarose plus buffer will exceed that of the column reservoir (800 µl), and will require that your sample be loaded onto the column in two steps
2. **Minimize exposure to UV light:** Excise the gel slice as quickly as possible, as exposure to UV light damages DNA. As long as the excision is done quickly, damage will be negligible
3. **Melt the agarose completely:** If the agarose is not completely melted, DNA remains trapped inside and cannot be extracted properly
4. **Heat the elution buffer for large DNA fragments:** Large DNA binds more tightly; heating the elution buffer helps to more efficiently release the DNA from the column matrix.

Optimized Monarch column design



Many purification columns are built with a retaining ring to hold the membrane in place, but this can trap buffer. Monarch columns' silica matrix is held in place without the use of a retaining ring, eliminating buffer retention and ensuring worry-free purification.

*TERMS & CONDITIONS: Offer valid in Canada only. Expires December 31st, 2022. Discount is eligible for products listed on this flyer. Purchase can be made online at www.neb.ca or through a NEB freezer program. Eligible products get discounted automatically when added to cart. Promotion not valid for cash or cash equivalent towards purchase(s). No substitutions. Offer may not be applied to existing, pending or prior orders. Cannot be combined with any other promotion or discount. One or more of these products are covered by patents, trademarks and/or copyrights owned or controlled by New England Biolabs, Inc. For more information, please email us at gbd@neb.com

Howard Cukier, Ph.D.
Territory Manager, Ontario
Cell: (416) 527-2352
hcukier@neb.com

Alexandre Rochette, Ph.D.
Territory Manager, Quebec
Cell: (514) 233-4557
arochette@neb.com

Julie Wong, Ph.D.
Territory Manager, Western Canada
Cell: (604) 767-5078
jwong@neb.com

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