

MACHEREY-NAGEL

# Molecular cloning solutions

Bioanalysis



Streamline your workflow

- Recombinant DNA technology solutions
- From colony PCR to protein expression analysis
- Trustworthy tools for molecular cloning success

**MACHEREY-NAGEL**

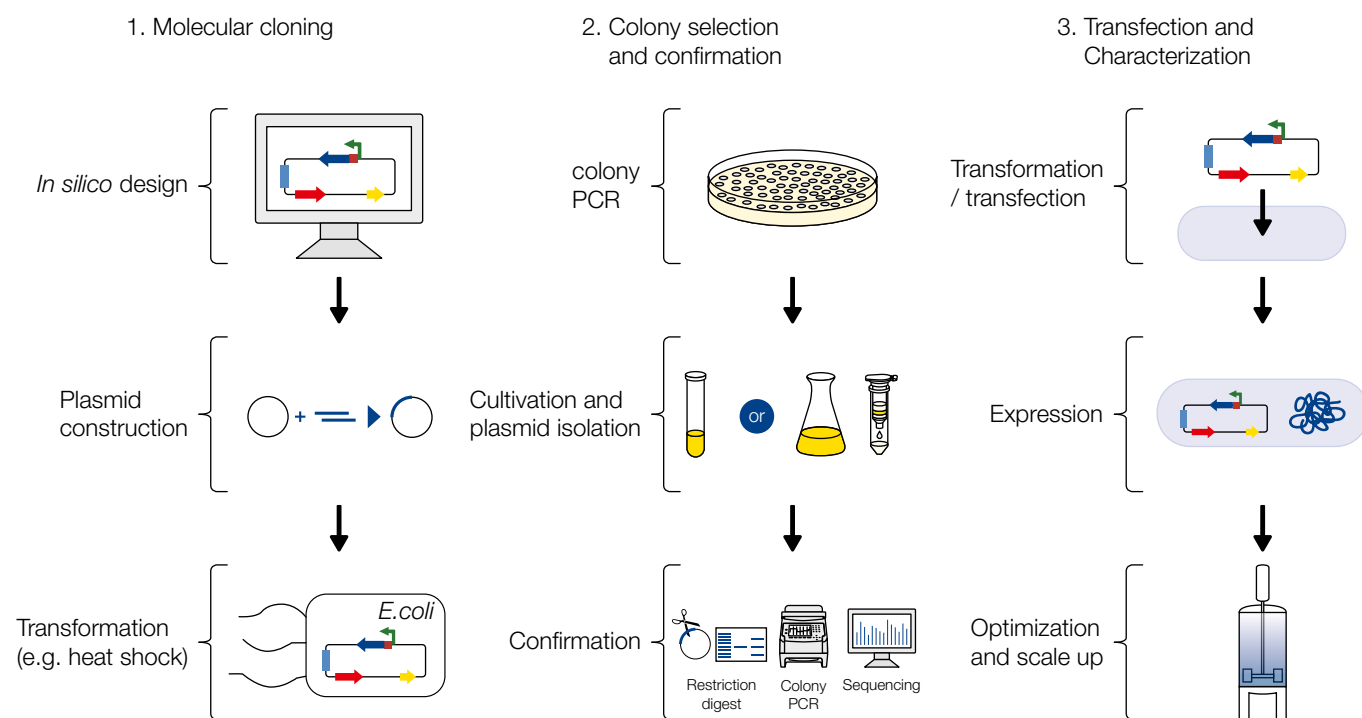
[www.mn-net.com](http://www.mn-net.com)



# Molecular Cloning Workflow Solutions

## Molecular Cloning

Molecular cloning for plasmid construction describes the process of inserting a specific DNA fragment into a plasmid vector, typically a bacterial plasmid, to produce recombinant DNA molecules for various applications in genetic research. Discover MACHEREY-NAGEL's tailored solutions for recombinant DNA technique.



## Colony PCR

In the initial phases of molecular cloning, MN presents the NucleoType HotStart PCR Master Mix tailored for colony PCR and genotyping. This pivotal method efficiently screens bacterial colonies, enabling the precise identification of specific DNA fragments. By swiftly pinpointing colonies containing desired genetic material, colony PCR streamlines subsequent selection processes for further analysis.

### MN product suggestion

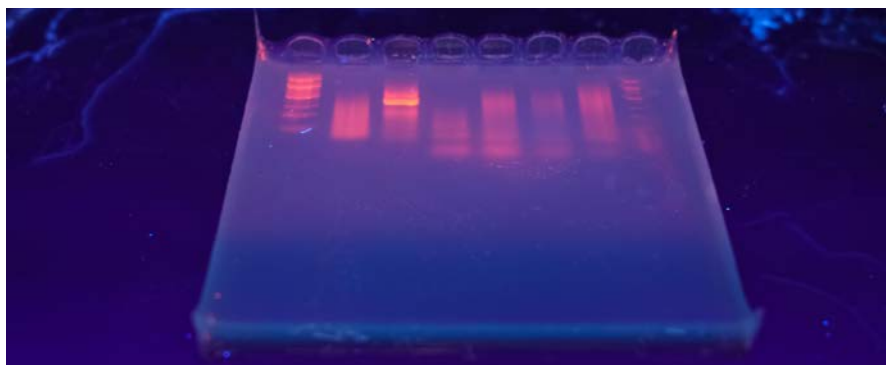
Colony PCR with direct-to-gel analysis  
NucleoType HotStart PCR Master Mix  
REF 743215



# Molecular Cloning Workflow Solutions

## Gel and PCR Clean up

After colony PCR, agarose gel separation, insert amplification, or other enzymatic reactions, cleaning up DNA fragments is a crucial step in recombinant DNA construction. Our procedures ensure the highest recovery and integrity of DNA samples by efficiently eliminating impurities and contaminants, laying a dependable foundation for subsequent cloning processes.



### MN product suggestions

#### Gel and PCR Clean-up Kits

NucleoSpin® Gel and PCR Clean-up  
REF 740609.10/50/250

NucleoSpin® Gel and PCR Clean-up XS  
REF 740611.10/50/250

NucleoSpin® 8 PCR Clean-up  
REF 740668/.5

NucleoSpin® 96 PCR Clean-up  
REF 740658.1/.2/.4/.24

NucleoSEQ® kit for dye terminator removal  
REF 740523.10/50/250

NucleoMag® NGS Clean-Up and Size Select (e. g. Clean-up of enzymatic reactions)  
REF 744970.5/.50/.500

## Plasmid Purification

Isolating high-quality plasmid DNA is essential for successful cloning experiments. Our dedicated plasmid purification protocols enable the extraction of DNA from bacterial cultures, guaranteeing optimal yields and purity levels essential for various molecular biology applications, including cloning and sequencing.



### MN product suggestions

#### Single Plasmid Mini Prep Kits

NucleoSpin® Plasmid  
REF 740588.10/50/250

#### HTP Plasmid Mini Prep Kits

NucleoSpin® 96 Plasmid  
REF 740625.1/4/24

#### Plasmid Midi/Maxi Prep Kits

NucleoBond® Xtra Midi  
REF 740410.10/50/100

NucleoBond® Xtra Maxi  
REF 740414.10/50/100

#### Plasmid Mega Prep Kits

NucleoBond® PC 2000  
REF 740576

#### Plasmid Giga Prep Kits

NucleoBond® PC 10000  
REF 740593

## Transfection of sensitive cell lines

In scenarios where experimental integrity is critical, such as transfection of sensitive cell lines, we offer specialized plasmid purification techniques. By thoroughly removing endotoxins from plasmid DNA preparations, we reduce potential sources of interference, ensuring the reliability and reproducibility of downstream experiments.



### MN product suggestions

For transfection of sensitive cells we recommend our transfection-grade or endotoxin-free kits.

NucleoSpin® Plasmid Transfection-grade  
REF 740490.10/50/250

NucleoBond® Xtra Midi EF  
REF 740420.10/50

NucleoBond® Xtra Maxi EF  
REF 740424.10/50

NucleoBond® PC 500 EF  
REF 740550/.10

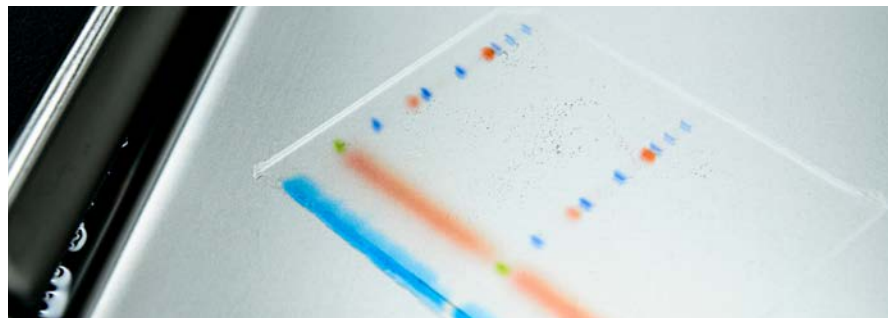
NucleoBond® PC 2000 EF  
REF 740549

NucleoBond® PC 10000 EF  
REF 740548

# Molecular Cloning Workflow Solutions

## Recombinant protein purification and characterization

For researchers working with recombinant proteins, purification is a crucial step in the process. Our suite of purification methods, including affinity chromatography, enables the isolation of target proteins from complex mixtures, facilitating the acquisition of pure protein samples suitable for comprehensive characterization and analysis.



More products in our protein purification guide



Large selection of various blotting membrane materials and cuts



### MN product suggestions

Protino® products are available in resin or pre-packed column format.

Protino® Ni-NTA Agarose (His-tag proteins)  
REF 745400.25/.100/.500

Protino® Glutathione Agarose 4B (GST-tag proteins)  
REF 745500.10/.100

Protino® Purification Plates  
REF 745426

Protino® Columns (14 / 35 mL empty columns)  
REF 745250.10 / 745255.10

Transfer membranes and blotting papers.  
Large selection of various membrane materials.

More products  
and formats  
available in  
our webshop

## Ordering Information

Product	Preps / Pack of	REF
■ NucleoType HotStart PCR Master Mix	2.5 mL	743215
■ NucleoSpin® Gel and PCR Clean-up	10/50/250	740609.10/.50/.250
■ NucleoSpin® Gel and PCR Clean-up XS	10/50/250	740611.10/.50/.250
■ NucleoMag® NGS Clean-Up and Size Select	5 mL / 50 mL / 500 mL	744970.5/.50/.500
■ NucleoSEQ® kit for dye terminator removal	10/50/250	740523.10/.50/.250
■ NucleoSpin® Plasmid	10/50/250	740588.10/.50/.250
■ NucleoSpin® Plasmid Transfection-grade	10/50/250	740490.10/.50/.250
■ NucleoBond® Xtra Midi	10/50/100	740410.10/.50/.100
■ NucleoBond® Xtra Midi EF	10/50	740420.10/.50
■ NucleoBond® Xtra Maxi	10/50/100	740414.10/.50/.100
■ NucleoBond® Xtra Maxi EF	10/50	740424.10/.50
■ Protino® Ni-NTA Agarose	25 mL / 100 mL / 500 mL	745400.25/.100/.500
■ Protino® Glutathione Agarose 4B	10 mL / 100 mL	745500.10/.100



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System  
EN ISO 13485:2016  
ISO 9001:2015

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