NucleoBond® Plasmid Systems

Plasmid DNA Purification from small to large scale

NucleoBond® Plasmid Purification Kits

1. NucleoBond® PC Kits	Five column sizes are available for purification of up to 10 mg of **ultra-pure high- and low copy plasmid DNA**
2. NucleoBond® PC EF Kits	Four column sizes are available for purification of up to 100 mg of **endotoxin-free plasmid DNA** for transfection of endotoxin-sensitive cells, gene therapy, and vaccination
3. NucleoBond® BAC 100 Kit	Increased volumes of lysis buffers and RNase A for purification of **large constructs, e.g. BACs, PACs, P1s, cosmids**

1. NucleoBond® PC Kits

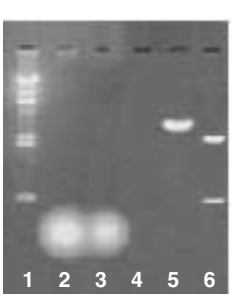
NucleoBond® AX is a silica-based anion exchanger developed and manufactured by MACHEREY-NAGEL for routine separation of different classes of nucleic acids, covered by **European patent E.P. 0496822**. The extraordinary high charge density on its hydrophilic, macroporous surface results in a salt concentration range for binding and elution of nucleic acids which is much larger than on conventional anion exchangers.
All NucleoBond® AX columns are resistant to organic solvents like alcohol, chloroform and phenol. They are free of RNase and DNase.
NucleoBond® AX columns are easy to handle. Solutions are pipetted or just poured into the columns. Their flow through the exchanger bed is by gravity. The columns do not run dry.

Features

- ✔ **anion-exchange chromatography**
- ✔ **fast and versatile separation system**
- ✔ **working range from nanograms to (milli) grams DNA**
- ✔ **recovery of plasmid DNA > 90%**
- ✔ **NucleoBond® folded filters eliminate the centrifugation step – no shearing even for large constructs**
- ✔ **approved and easy procedures**
- ✔ **structural integrity > 92% ccc monomer**

Purification of plasmid DNA (pUC19) using NucleoBond® AX 100

As can be seen in the figure, this procedure yields high pure plasmid DNA that is free of contaminants like genomic DNA or RNA.

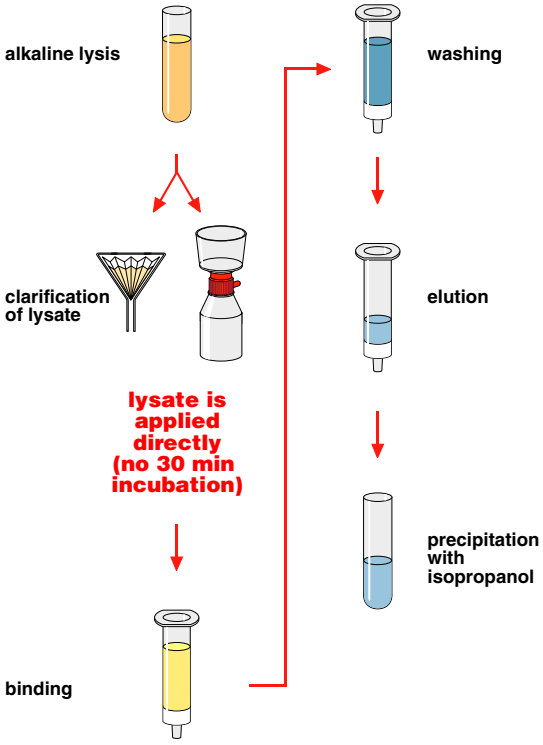


1 % agarose gel (TAE)

1: marker
2: flow-through
3: 1st washing step
4: 2nd washing step
5: elution
6: purified plasmid digested with *Eco*RI / *Ssp*I

2. NucleoBond® PC EF Kits

Procedure



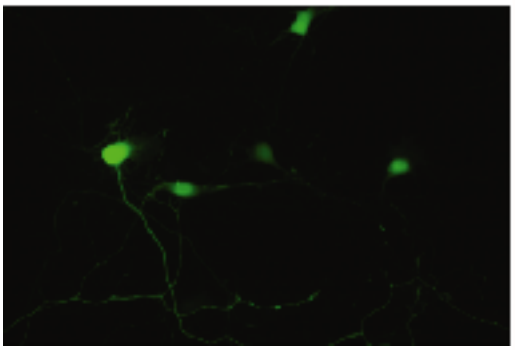
Features

- ✔ covered by US patent # US 6, 428703 B1
- ✔ no additional steps required – minimal hands-on-time
- ✔ endotoxin-free plasmids for transfection, gene therapy, and vaccination
- ✔ DNA with less than 0,05 EU/µg DNA
- ✔ columns available for up to 500 µg, 2000 µg, 10 mg, and 100 mg
- ✔ folded filters/bottle top filters included for clarification of bacterial lysate

Application Data

Endotoxin-free DNA for transfection of primary neurons

Expression of GFP (Green Fluorescent Protein) in mature hippocampal neurons (>7 days in culture) grown at low density on poly-L-lysine coated glass coverslips.
The neurons were transiently transfected with a cDNA (EF-free plasmid DNA was purified with NucleoBond® PC 10000 EF) encoding GFP using a modified calcium phosphate protocol (Koehrmann et al, 1999) and the expression pattern was viewed 16 hours post-transfection.



3. NucleoBond® BAC 100 Kit

Customer Testimonial

"Only one of the kits we tried worked; that was the NucleoBond® kit. The vector DNA purified with this kit gave us a transformation efficiency that was comparable to that reported in the literature using BAC vector DNA prepared by two or three rounds of CsCl gradient centrifugation."

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MACHEREY-NAGEL

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