Customized *Minicircle* DNA

*Minicircle* - minimized DNA for maximized success

*Minicircle* features

- no bacterial backbone sequences (e.g., ori, antibiotic resistance marker)
- supercoiled monomer of minimal size
- highly purified
- reduced CpG content
- improved safety
- minimized side effects
- excellent transfection efficiency

The PlasmidFactory *Minicircle* System – unique Superiority!

[Diagram showing the transformation from Parental Plasmid (PP) to Minicircle (MC) to Miniplasmid (MP)]

PlasmidFactory.com
Proprietary and patented minicircle DNA technology by PlasmidFactory

Production procedure

Your plasmid containing the gene of interest (GOI) serves as starting material. Either by cut and paste, gene synthesis or amplification by PCR, this will be inserted into the so-called parental plasmid. Intramolecular recombination of this parental plasmid leads to the minicircle DNA molecule containing almost only the GOI.

![Diagram of production procedure]

**Your Gene of Interest (GOI)**

Your plasmid

Fragment with GOI

Parental Plasmid without GOI

Parental Plasmid with GOI

Cloning of Parental Plasmid containing your GOI

Production of Minicircle containing your GOI

Minicircle with GOI

**Literature**

M. Holstein, C. Mesa-Nuñez, C. Miskey, E. Almarza, V. Poletti, M. Schmeer et al. (2018), Efficient Non-viral Gene Delivery into Human Hematopoietic Stem Cells by Minicircle Sleeping Beauty Transposon Vectors, Molecular Therapy, 26(4), 1137-1153


T. Buchholz, M. Schmeer and M. Schleef (2017), Size Matters, European Biopharmaceutical Review, October, 68-70


