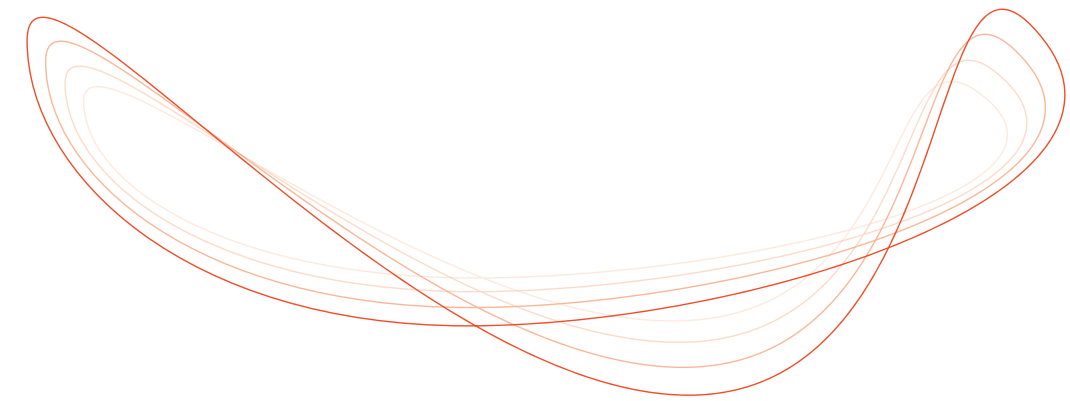


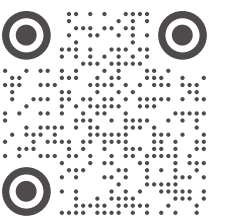


PLASMID & MINICIRCLE PRODUCTS





05 - 07	pDNA MANUFACTURING
08 - 09	MINICIRCLE MANUFACTURING
10 - 13	IN STOCK PRODUCTS
14 - 15	ANALYTICS & SERVICES



Various quality grades to suit your specific requirements



Get in touch to define your requirements



Receive your DNA in desired quality



Production of plasmid or minicircle



Get a quote and place an order



Send your DNA sample

Research grade

Kit alternative for basic research

- ✓ Several parallel manufacturing lines in our main facility in Bielefeld, Germany
- ✓ Scalable production process starting from 5 mg

Key feature

Fermentation-based workflow

CCC classic grade

Optimized, highly efficient DNA for basic research, pre-clinical and toxicology studies

- ✓ Several parallel production lines located in Bielefeld
- ✓ Scalable production process starting from 10 mg

Key feature

Included CGE analysis to quantify DNA topologies

High Quality (HQ)* grade

Suitable as starting material for GMP production of e.g., AAVs, CAR-T cells or mRNA vaccines in early clinical phase

- ✓ Two HQ facilities located in Bielefeld
- ✓ According to EMA guidelines
- ✓ Production scale 10 mg – 10 g

Key feature

Complete raw material traceability and use of dedicated labs

GMP grade

GMP-certified DNA for clinical phases and market supply e.g., for direct human application

- ✓ State-of-the art GMP facility located in Bielefeld
- ✓ GMP-certified production
- ✓ Scalable production process

Key feature

Single use equipment



*HQ: High Quality grade is produced in accordance with EMA guideline CHMP/BWP/2458/03 as the highest non-GMP quality standard

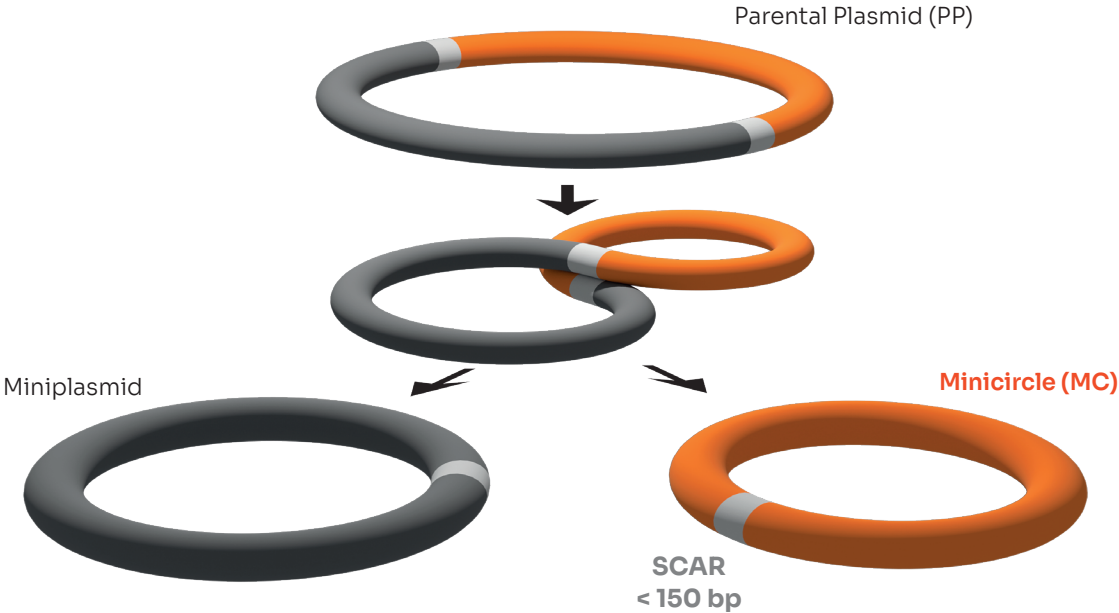


Comparison of our quality grades: Plasmid DNA

	Research grade	CCC classic grade	High Quality grade*	GMP grade
Applications	Kit alternative for basic research	Optimized, highly efficient DNA for basic research, pre-clinical and toxicology studies, enzyme-free	DNA starting material for early clinical phase GMP production of e.g., AAV, CAR-T cells or mRNA vaccines	DNA of highest quality as starting material for clinical phases and market supply or DNA for direct human application
Characteristics				
Produced by fermentation	✓	✓	✓	✓
Guaranteed amount of plasmid DNA	✓	✓	✓	(✓)**
Adjustment of DNA concentration included	✓	✓	✓	✓
Customized filling included	✓	✓	✓	(✓)**
Certified quality incl. QC report	✓	✓	✓	✓
Storage of glycerol stock and retain samples for repeat orders	✓	✓	✓	✓
Antibiotics-free fermentation	✓	✓	✓	✓
Cultivation media according to EMA/410/01 rev.3, 2011/C 73/01 (TSE/BSE certificate)			✓	✓
All raw materials according to EMA/410/01 rev.3, 2011/C 73/01 (TSE/BSE certificate)			✓	✓
Completely enzyme-free		✓	✓	✓
Characterized and documented cell bank and pilot cultivation			✓	✓
Verified removal of bacterial endotoxins (LPS assay)	✓	✓	✓	✓
Removal of RNA and proteins	✓	✓	✓	✓
Specific removal of bacterial chromosomal DNA and oc-forms		✓	✓	✓
CGE analysis (ccc-supercoiled vs. oc plasmid topologies)		✓	✓	✓
Extended specification		(✓)**	✓	✓
Documentation according to GMP/GMP principles			✓	✓
Dedicated lab			✓	✓
QM system applied			✓	✓
Spatially separated upstream and downstream processes			✓	✓
Single use equipment				✓
Compliant with applicable GMP-guidelines and GMP certified				✓

*HQ: High Quality grade is produced in accordance with EMA guideline CHMP/BWP/2458/03 as the highest non-GMP quality standard | **On request

PlasmidFactory's small but powerful minicircle DNA: Less is more!



✓

Minicircle features & advantages

▪ No bacterial backbone

▪ No antibiotic resistance or other bacterial selection marker

▪ Almost no cargo size restriction

▪ Small, monomeric supercoil

▪ No retropackaging during AAV production

▪ Reduced immunogenicity

▪ Reduced DNA toxicity

▪ Reduced transgene silencing

▪ Improved yield – minimized costs

▪ Successful in clinical CAR-T cell production

Publications

▪ Prommersberger et al., 2021 (Gene Ther.)

▪ Prommersberger et al., 2022 (Mol. Biol.)

AVAILABLE IN
LARGE
SCALE!

	Research grade-MC	High Quality grade*-MC	GMP grade-MC
Applications	Optimized, highly efficient DNA for basic research, pre-clinical and toxicology studies	DNA starting material for early clinical phase GMP production of e.g., AAV, CAR-T cells or mRNA vaccines	DNA of highest quality as starting material for late clinical phase and market supply or DNA for direct human application
Characteristics			
Guaranteed amount of minicircle DNA	✓	✓	(✓)**
Adjustment of DNA concentration included	✓	✓	✓
Customized filling included	✓	✓	(✓)**
Certified quality incl. QC report	✓	✓	✓
Storage of glycerol stock of parental plasmid and retain samples for repeat orders	✓	✓	✓
Antibiotics-free fermentation	✓	✓	✓
Cultivation media according to EMA/410/01 rev.3, 2011/C 73/01 (TSE/BSE certificate)		✓	✓
All raw materials according to EMA/410/01 rev.3, 2011/C 73/01 (TSE/BSE certificate)		✓	✓
Characterized and documented cell bank and pilot cultivation		✓	✓
Verified removal of bacterial endotoxins (LPS assay)	✓	✓	✓
Removal of RNA and proteins	✓	✓	✓
Specific removal of bacterial chromosomal DNA and oc-forms	✓	✓	✓
CGE analysis (ccc-supercoiled vs. oc plasmid topologies)	✓	✓	✓
Extended specification	(✓)**	✓	✓
Documentation acc. to GMP/GMP principles		✓	✓
Dedicated lab		✓	✓
QM system applied		✓	✓
Spatially separated upstream and downstream processes		✓	✓
Single use equipment			✓
Compliant with applicable GMP-guidelines and GMP certified			✓

*HQ: High Quality grade: is produced in accordance with EMA guideline CHMP/BWP/2458/03 as the highest non-GMP quality standard | **On request

8

9

Reporter plasmids/minicircles – ready to use!

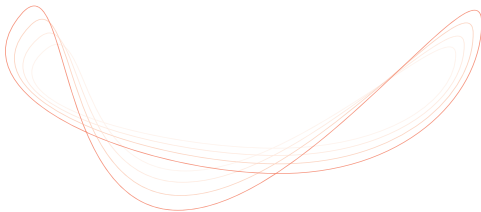
Item No.	Name	Special features	Vector size
PF0450	pUC21	Control plasmid, Amp resistance	3.2 kbp
PF0451	pUK21	Control plasmid, Kan resistance	3.1 kbp
PF0464	pCMV	CMV, Control plasmid, Amp resistance	3.5 kbp
PF0461	pCMV-luc	CMV, firefly luciferase, Amp resistance	6.2 kbp
PF0462	pCMV-lacZ	CMV, β-galactosidase, Amp resistance	7.2 kbp
PF0463	pCMV-GFP	CMV, GFP, Kan resistance	3.5 kbp
MC3048	MC.CMV-luc	CMV, firefly luciferase, no bacterial backbone (e.g., no resistance gene, no ori)	3.6 kbp
MC3291	MC.CMV-lacZ	CMV, β-galactosidase, no bacterial backbone (e.g., no resistance gene, no ori)	4.6 kbp
MC3293	MC.CMV-GFP	CMV, GFP, no bacterial backbone (e.g., no resistance gene, no ori)	1.8 kbp

All In Stock products are pre-produced in Research grade quality and are therefore available at short notice. Minimum order quantity 5 mg (plasmid DNA) and 0.5 mg (minicircle DNA). Other quality grades on request.

pEPito plasmids containing S/MAR elements

Item No.	Name	Special features	Vector size
PF1160	pEPito-hCMV/EF1-EGFPLuc	R6K ori, hCMV enhancer, EF1 promotor, eGFP, firefly luciferase, S/MAR, Amp and Zeo resistance	7.0 kbp
PF1161	pEPito-CMV-EGFPLuc	R6K ori, CMV-IEP promotor, eGFP, firefly luciferase, S/MAR, Amp and Zeo resistance	7.0 kbp
PF1162	pEPito-CMV-EGFP-IRES-BSD	R6K ori, CMV-IEP promotor, eGFP, IRES, BSD, MARS, Amp and Zeo resistance	5.8 kbp
PF1163	pEPito-hCMV/EF1-EGFP-IRES-BSD	R6K ori, hCMV enhancer, EF1 promotor, eGFP, IRES, BSD, S/MAR, Amp and Zeo resistance	5.7 kbp
PF1164	pEPito-hCMV/EF1-EGFP	R6K ori, hCMV enhancer, EF1 promotor, eGFP, S/MAR, Amp and Neo resistance	5.2 kbp
PF1165	pEPito-CMV-EGFP-IRES-BSD-ΔS/MAR	R6K ori, CMV-IEP promotor, eGFP, IRES, BSD, Amp and Zeo resistance	3.9 kbp
PF1166	pEPito-hCMV/EF1-EGFP-IRES-BSD-ΔS/MAR	R6K ori, hCMV enhancer, EF1 promotor, eGFP, IRES, BSD, Amp and Zeo resistance	3.8 kbp

All In Stock products are pre-produced in Research grade quality and are therefore available at short notice. Minimum order quantity 5 mg. Other quality grades on request.



Compare minicircle DNA and the corresponding plasmid in your experimental setting and optimize your transfection

McBox® GFP, luc, lacZ

McBox® GFP
Item no. PFBox102

MC.CMV-GFP
(Minicircle, 100 µg)

pCMV-GFP
(Plasmid, 100 µg)

WFI
(Water for Injection, 500 µL)

McBox® luc
Item no. PFBox101

MC.CMV-luc
(Minicircle, 100 µg)

pCMV-luc
(Plasmid, 100 µg)

WFI
(Water for Injection, 500 µL)

McBox® lacZ
Item no. PFBox103

MC.CMV-lacZ
(Minicircle, 100 µg)

pCMV-lacZ
(Plasmid, 100 µg)

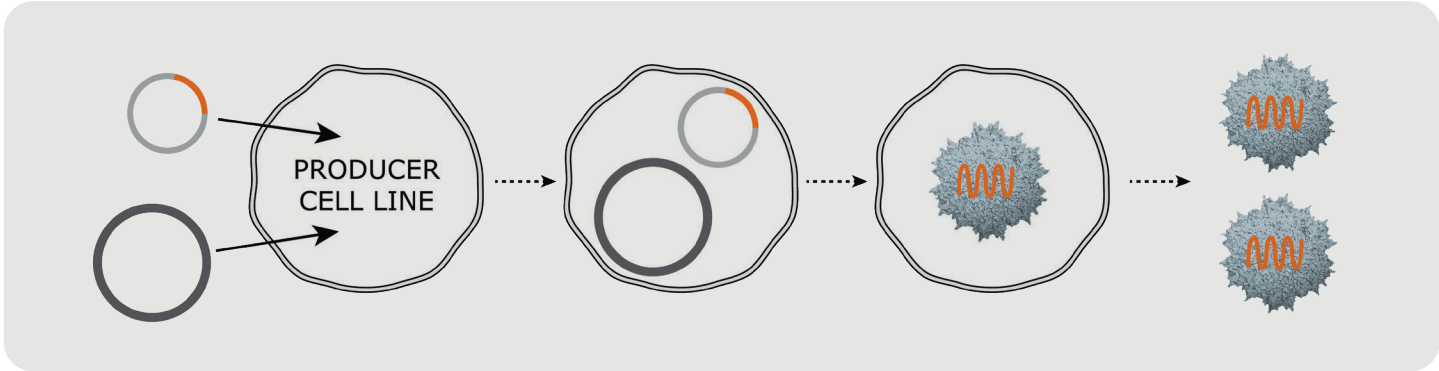
WFI
(Water for Injection, 500 µL)



Our In Stock service includes

- Reproducible quality of the DNA by our standardized manufacturing technology and process
- Verified LPS-endotoxin removal
- Precisely defined quality and a homogeneous product supported by our proprietary capillary gel electrophoresis (CGE) analysis technology for the quantification of different plasmid and minicircle topologies
- Complete characterization of the product by LPS assay, BCA assay, UV spectroscopy, restriction analysis as well as detection of RNA and bacterial chromosomal DNA by agarose gel electrophoresis (AGE)

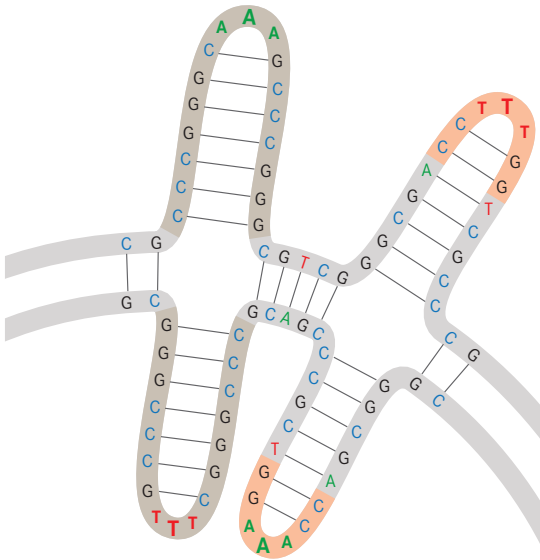
Plasmids & minicircles for AAV production – helper & packaging/vector constructs



Exclusive provider of the smart 2-plasmid-system to generate AAV vectors

The 2-plasmid-system (exclusive license from the German Cancer Research Centre/DKFZ) requires only two components to produce AAVs in HEK cells – the vector plasmid containing the transgene flanked by ITRs and a second plasmid combining the adeno helper functions and the packaging functions on one plasmid.

This presents a cost-effective solution, maximizing efficiency and minimizing expenses.



ITRRESCUE®
AAV vector plasmids – keeping ITRs intact
PlasmidFactory’s proprietary ITRRESCUE® technology enables amplification of plasmid DNA preserving sensitive ITR sequences.

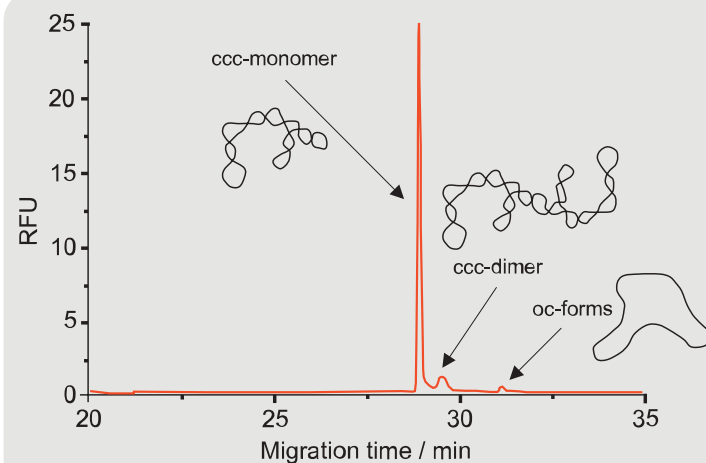


Plasmids to go

Item No.	Name	Special features	Vector size
PF0400	pDM	Serotype: rep2/cap2 wild type: rep (rep89, 68, 52, 49) ITR of AAV2, no RFP	21.5 kbp
PF0401	pDP1rs	Serotype: rep2/cap1 RFP	23.7 kbp
PF0402	pDP2rs	Serotype: rep2/cap2 RFP	23.7 kbp
PF0403	pDP3rs	Serotyp: rep2/cap3 RFPe	23.7 kbp
PF0404	pDP4rs	Serotype: rep4/cap4 RFP	23.1 kbp
PF0405	pDP5rs	Serotype: rep2/cap5 RFP	23.7 kbp
PF0406	pDP6rs	Serotype: rep2/cap6 RFP	23.7 kbp
PF0431	pDP1	Serotype: rep2/cap1 like pDP1rs, no RFP	21.9 kbp
PF0421	pDG (=pDP2)	Serotype: rep2/cap2 like pDP2rs, no RFP	21.8 kbp
PF0433.2	pDP3.2	Serotype: rep2/cap3 like pDP3rs, no RFP	21.9 kbp
PF0434	pDP4	Serotyp: rep4/cap4 like pDPe4rs, no RFP	21.2 kbp
PF0435	pDP5	Serotype: rep2/cap5 like pDP5rs, no RFP	21.8 kbp
PF0436	pDP6	Serotype: rep2/cap6 like pDP6rs, no RFP	21.9 kbp
PF0478	pDP8.ape	Serotype: rep2/cap8	22.0 kbp
PF0439	pDP9	Serotype: rep2/cap9	21.8 kbp
PF0422	pDG (R484E/R585E)	Serotype: rep2/cap2 like pDG (PF0421) without HSGAG binding motif	19.2 kbp
PF1451	pAAV-ssGFP	vector plasmid with AAV-ITRs, CMV promoter, GFP, selection marker (Amp or Kan)	8.0 kbp
PF1500	pAAV-scGFP	vector plasmid with AAV-ITRs, CMV promoter, GFP, selection marker (Amp or Kan)	6.0 kbp
MC3051	MC.AAV-ssGFP	AAV-ITRs, CMV promoter, GFP, no bacterial backbone (e.g., no resistance genes)	4.5 kbp
MC3064	MC.AAV-scGFP	AAV-ITRs, CMV promoter, GFP, no bacterial backbone (e.g., no resistance genes)	2.5 kbp

All In Stock products are pre-produced in Research grade quality and are therefore available at short notice. Minimum order quantity 5 mg (plasmid DNA) and 0.5 mg (minicircle DNA). Other quality grades on request.

Analysis and storage service complement our DNA manufacturing service



CGE service

Quantification of the different topologies of your DNA sample based on Capillary Gel Electrophoresis – a powerful, fast and reliable method!

The CGE analysis is a proprietary analytical tool of PlasmidFactory and the only reliable method to quantify plasmid forms!

Capillary Gel Electropherogram and different types of plasmid topology

Safeguarding your DNA during long-term storage in a GMP-compliant environment



Included

Transfer of the plasmid DNA to a continuously monitored and validated depot at a constant temperature lower or at -20°C

All parameters according to ICH guidelines

Permanent and GMP-compliant control and documentation

Additional

Stability control is performed via AGE (Agarose Gel Electrophoresis) and CGE (Capillary Gel Electrophoresis)

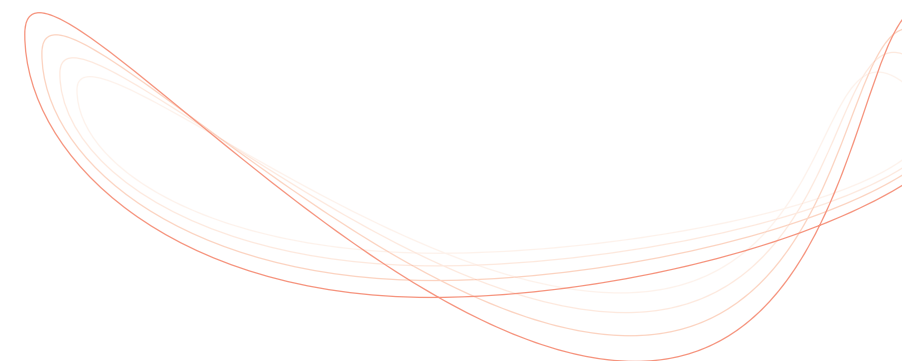
Storage at different temperatures

Just in time delivery on dry ice

Would you like to get to know us?

We look forward to welcoming you!

PlasmidFactory.com | contact@plasmidfactory.com





PlasmidFactory.com

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