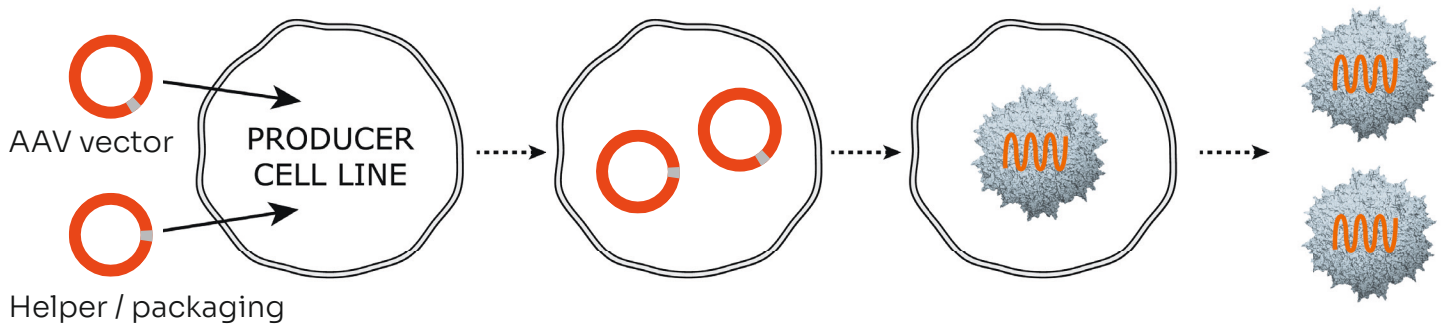


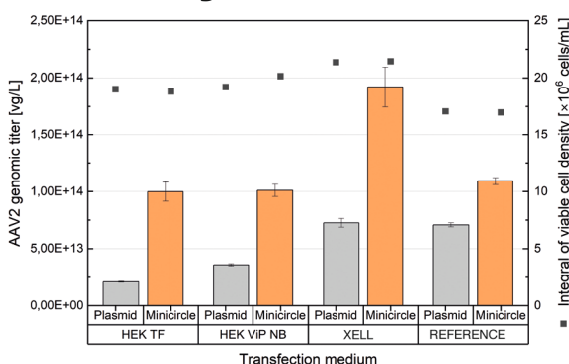
Boosting AAV Production with Minicircles



Minicircle advantages

- ✓ **2-plasmid system** – fewer components, higher efficiency
- ✓ **ITRPROTECT / ITRRESCUE®** – intact ITRs, maximized packaging
- ✓ **Future proof** – regulatory ready alternative vector
- ✓ **Higher yields** – up to 4× higher titers, 30× transduction efficiency
- ✓ **Optimized vectors** – fewer empty capsids, no backbone packaging
- ✓ **Cleaner & safer** – lower immunogenicity, less silencing, better quality
- ✓ **Scalable to GMP** – seamless transition to clinical production

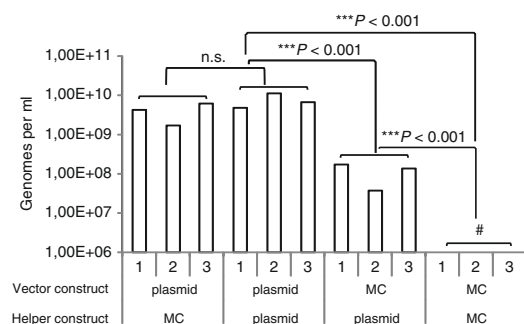
Higher AAV titers



AAV titers measured 72 h post-transfection were 3–4× higher with minicircle DNA (MC.AAV-ssGFP + pDG, both PlasmidFactory) vs. plasmid DNA (pAAV-ssGFP + pDG, both PlasmidFactory).

Kraemer et al., ESGCT Annual Congress 2021

Cleaner AAV vectors



Replacing both vector and helper plasmids with minicircles eliminated detectable antibiotic resistance sequences from AAV preparations, resulting in bacterial backbone-free, cleaner vectors, enabling up to 30x higher transduction efficiency.

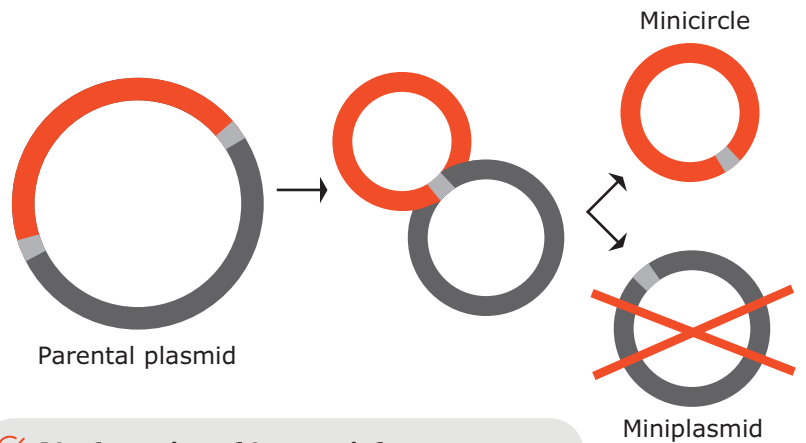
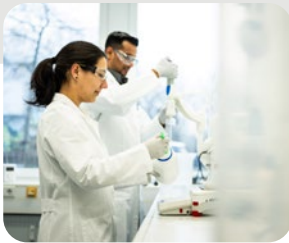
Schnödt et al., Molecular Therapy – Nucleic Acids (2016) 5, e355

Boost your AAV program and learn more about our plasmids and Minicircle DNA for superior vector quality.



Minicircle – Engineered for Efficiency

The parental plasmid undergoes recombination, producing a supercoiled Minicircle with the gene of interest, while the bacterial backbone forms a miniplasmid that is removed during purification.



- ✓ No functional bacterial sequences
- ✓ Smaller in size & monomeric
- ✓ Large-scale production up to GMP

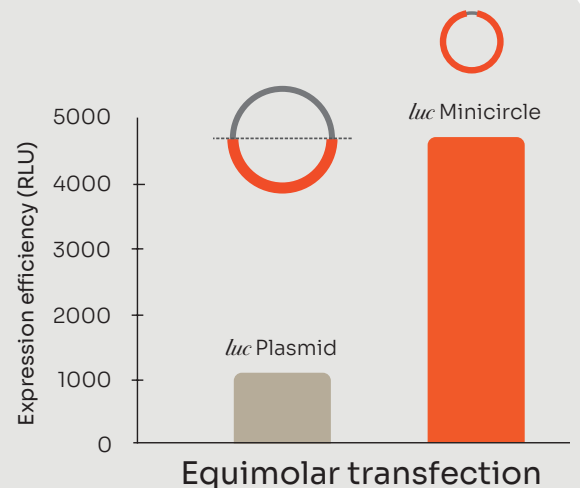
Small, precise, powerful

Minicircle advantages

- ✓ Higher transfection rate
- ✓ Better expression efficiency
- ✓ Increased yield – reduced costs
- ✓ Reduced transgene silencing
- ✓ Less DNA toxicity
- ✓ Lower safety risk

Available:

- License-free
- Globally
- In large scale



Minicircle manufacturing service: Your key to innovation

Efficient transfection, strong expression and low toxicity – clinically validated and trusted from research to GMP in CAR-T and advanced cell and gene therapies.

