Minicircle DNA Vector Technology
Non-integrative sustained expression

The Minicircle Advantage
Minicircles are episomal DNA vectors that are produced as circular expression cassettes devoid of any bacterial plasmid DNA backbone. Their smaller molecular size enables more efficient transfections and offers sustained expression over a period of weeks as compared to standard plasmid vectors that only work for a few days.

Production of Minicircle DNA
1. Clone your gene-of-interest into the parental plasmid
2. Transform into ZYCY10P3S2T E. coli
3. Induce with arabinose
4. Purify with plasmid purification kit

ZYCY10P3S2T E. coli
Bacterial strain engineered for minicircle production.

Arabinose induces ΦC31 integrase and the I-SceI endonuclease simultaneously.
ΦC31 integrase produces the MC-DNA molecules and the parental plasmid.
Scel endonuclease degrades the parental plasmid DNA backbone.

As described in
Minicircle DNA Technology

Minicircle Vector Offering

Expression cassette options

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<th>Expression Cassette Options</th>
<th>Parental Plasmid</th>
<th>Minicircle DNA</th>
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Supporting Products

- Kanamycin (50mg/ml) MN800A-1
- Arabinose solution (20%) MN850A-1
- ZCY10P3S2T E. coli MN900A-1

Long-term in vitro expression from transfection

Sustained in vivo expression

Mouse Tail-vein injection leads to sustained expression for months

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