



Enzymatic DNA for mRNA production

Are plasmid DNA issues impacting your mRNA program delivery?

Did you know that replacing plasmid DNA with enzymatically produced DNA in your mRNA production eliminates many issues around complex or unstable sequences?

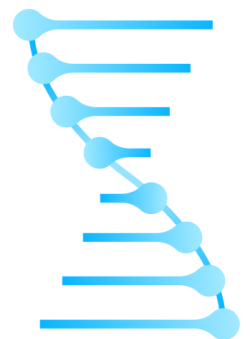
Enzymatic DNA also requires less DNA for equivalent IVT yields, supports complex sequence production, such as long polyA tails (>120A), and can incorporate genes of interest up to 20kb, making it very flexible to support a range of genetic medicines.

Many biotech and pharma companies focused on advanced therapies are taking advantage of enzymatic DNA to deliver rapid mRNA production using less DNA.

Off the shelf
mRNA for
initial
evaluation:

T7-Lux
(Firefly luciferase with
poly A tail)

Supporting your
mRNA production



Introducing doggybone DNA (dbDNA™)

Touchlight's doggybone DNA is a linear, double stranded, covalently closed DNA vector which is produced through an enzymatic manufacturing process. The cell-free process avoids selective pressure often associated with plasmid instability which produces truncations and malformations of DNA.



How can dbDNA help you?

- **Manufactured faster than plasmid** – dbDNA limits generational instability by utilising a cell-free enzymatic production process. Enzymatic manufacturing enables scalable GMP DNA production in weeks rather than the months taken to source, make and release plasmid DNA.
- **Amplifies unstable sequences** (e.g., ITRs) with high fidelity. It is routinely manufactured containing 120A polyA tails.
- **Eliminates packaging of bacterial sequences** - excludes bacterial sequences, including antibiotic resistance genes, avoiding regulatory challenges.
- **Reduces *E. coli*-related impurities** - endotoxin, host cell protein and nucleic acid
- **Scalable** – Manufactured using benchtop equipment with a significantly smaller footprint than-fermentation based production.

Access dbDNA in different ways.

- **Off-the-shelf catalogue products** for initial evaluation.
- **Test your custom sequence** with the supply of milligrams of dbDNA. This can be a quick and easy way to access dbDNA and test in your platform.
- **Toxicology and cGMP material supply.** Flexible supply and development to meet your scale and timeline.

Can we help to address your DNA challenges?

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