

# dna scale-up



## Mini, Midi, Maxi, and Giga prep scale DNA. Our most popular Flexible Workflow deliverable.

Sequence complexity and length can greatly impact the outcome of plasmid DNA scale-up. Work with Neo to develop customized processes for DNA scale-up, including optimized cell growth parameters and a variety of quality control tests. Ensure consistent delivery of high quality DNA materials that meet defined specifications.

Combine with other DNA services from Neo to create a **Flexible Workflow**



### Specifications and TAT for DNA Scale-Up at Neo\*

PREP SCALE	MEDIAN LENGTH (KB)	MEDIAN YIELD (UG)	THRESHOLD FOR REPREP (UG)	260/280	AVERAGE TAT (DAYS) <sup>†</sup>
Midi	6	150	40	1.8–2.0	4–6
Maxi	6	300	80	1.8–2.0	4–6
Giga	9	3500	500	1.8–2.0	4–6
Custom	Contact us to design your custom DNA deliverable				

\* Data from >8,000 total **high complexity** plasmid preps performed in 2023

<sup>†</sup> Rush service available, typically 3 day TAT

### Sample Types

OPTION	DETAILS
DNA	Any format, plates preferred
Petri Plate	Any format, we will pick colonies from plate
Colony Water	Any format, plates preferred

### DNA Delivery Options Post Scale-Up

OPTION	DETAILS
Plasmid DNA Concentration	<ul style="list-style-type: none"> <li>Normalized</li> <li>Full yield (Qubit or 260/280 measurement)</li> </ul>
Labware	As requested
Layout of Samples in Labware	As requested

## Cell Growth Optimization Options

OPTION	DETAILS
Media Composition	Media and supplements as requested
Strain Background	As requested
Growth Temperature	25–37°C

## Add-On QA/QC to Evaluate Plasmid DNA (Pre or Post Scale-Up)

QA/QC TEST	DETAILS
Next-Generation Sequencing (Illumina)	<ul style="list-style-type: none"><li>Perform whole plasmid sequencing <b>before</b> DNA scale-up to identify sequence perfect winners to move forward into scale-up</li><li>Perform whole plasmid sequencing <b>after</b> DNA scale-up to evaluate population level sequence alterations</li></ul>
Sanger Sequencing	Interrogate regions of a plasmid sequence that are not amenable to NGS evaluation (e.g. polyA tracts, repetitive regions) before and/or after DNA scale-up
Tape Station	Precisely evaluate the integrity of plasmid DNA
Restriction Digestion/ Fragment Analysis	Evaluate plasmid integrity before or after scale-up via restriction enzyme digestion and check gel
Degree of Supercoiling	Determine the extent of plasmid supercoiling

## Parts Repository

STORAGE TYPE	DESCRIPTION
Short-Term	Store purified DNA or glycerol stocks at Neo for short periods of time (e.g. 1–2 months) to enable rapid re-order and scale up of winners that show successful results in cell-based assays
Long-Term	Store purified DNA or glycerol stocks at Neo for long periods of time (e.g. 1–2 years) for rapid re-order and scale-up of inventoried DNA products or for disaster recovery



### PLACING ORDERS AT NEO

The Neo team has built a dynamic order portal, which makes it easy for our partners to place order requests, track progress for each project and/or sample, and reconcile invoices.



### CONTACT US

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