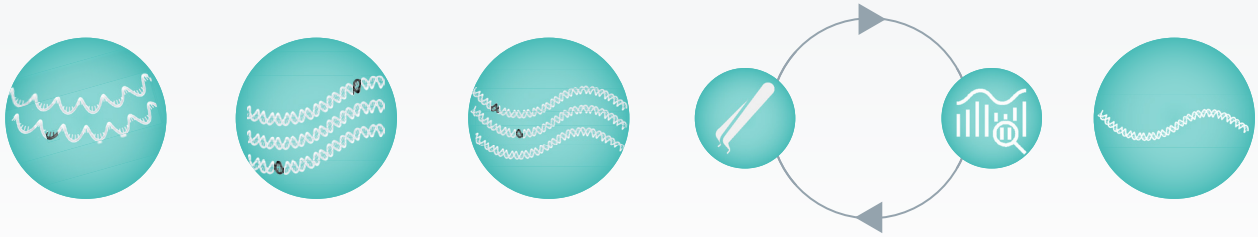

elegenbio.com
ENFINIA™ DNA
CELL-FREE DNA MANUFACTURING
ELEGEN

CELL-FREE SYNTHETIC DNA MANUFACTURING

provides a rapid and reliable supply of long and complex synthetic DNA

Conventional DNA: Relies on Cell-Based Cloning to Remove Errors

Errors in oligos, fragments, or assemblies increase the time spent cloning and sequencing

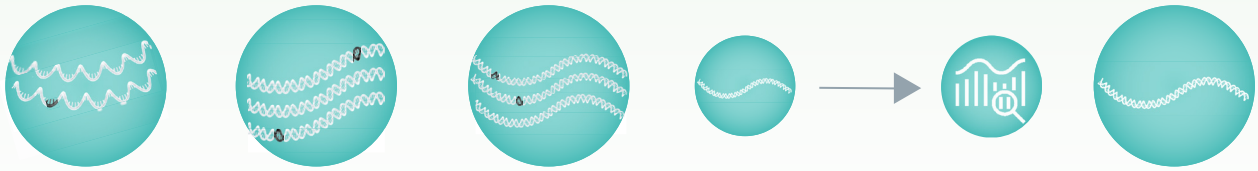


Oligo Synthesis	Fragments	Constructs	Pick & Sequence Multiple Clones	Perfect Sequence
<300 bp single strands	<1000 bp double-strand blocks	Full-length genes, gene clusters, templates, etc.	Pick and sequence 10+ colonies to find sequence perfect clone	Spend weeks or months building full-length constructs

Genes produced in a week still require added time to clone and sequence

ENFINIA™ DNA: Sequence-Perfect DNA in Days

Elegen's cell-free DNA synthesis delivers unparalled speed, length, complexity and accuracy



Oligo Synthesis	Fragments	Constructs	Rapid Cell-Free Cloning	Perfect Sequence
<300 bp single strands	<1000 bp double-strand blocks	Full-length genes, gene clusters, templates, etc.	Highly complex double-stranded linear ENFINIA DNA is cloned and NGS-verified without use of cells	Recieve NGS-verified linear DNA up to 7kb in 6 to 8 business days

Immediately use ENFINIA DNA without additional cloning or purification

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INDUSTRY LEADING NGS-VERIFIED SPEED, LENGTH, COMPEXITY & ACCURACY

enables you to iterate designs quickly and gain insights faster

Instantly Streamline Discovery and Development

Faster Turnaround

as fast as **7** business days

Rapidly iterate designs to explore a broader sequence space faster.

Longer DNA

up to **7**kb in length

Stop wasting time to build full length constructs from low-quality parts.

Superior Accuracy

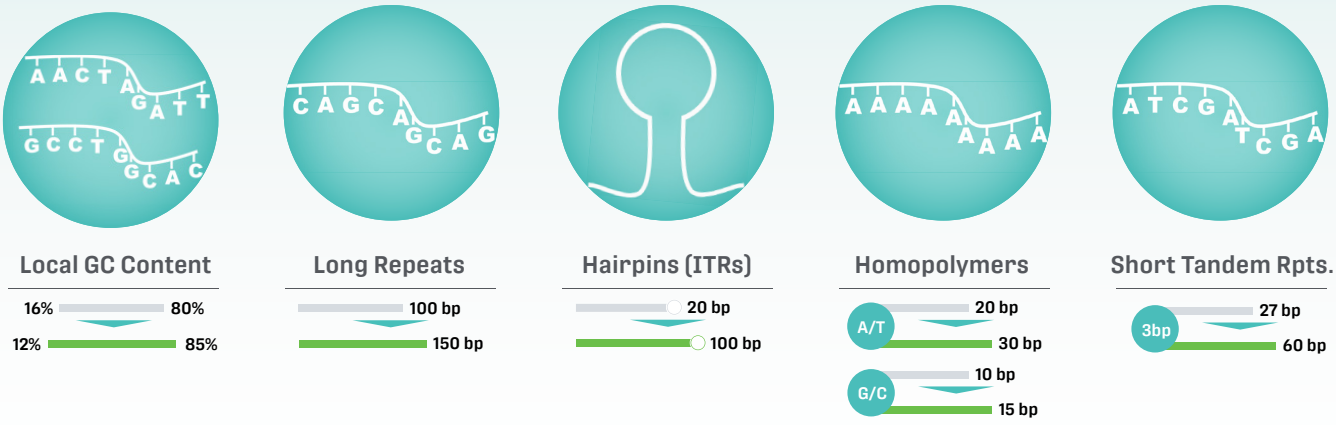
NGS Verified

1:70,000 per bp error rate

Eliminate cell-based cloning from your development process.

Plan with confidence • Execute on time • Accomplish more

Explore a More Diverse Seqeunce Space with High Complexity Synthesis

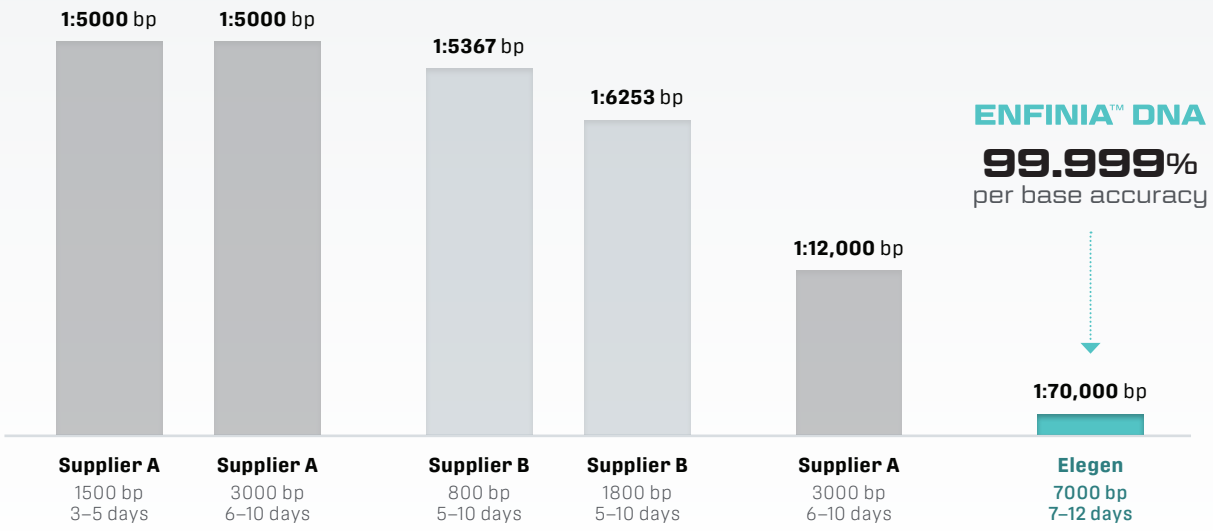


Receive long, accurate and complex DNA without compromising speed

SYNTHETIC DNA THAT ONLY ELEGEN CAN PROVIDE

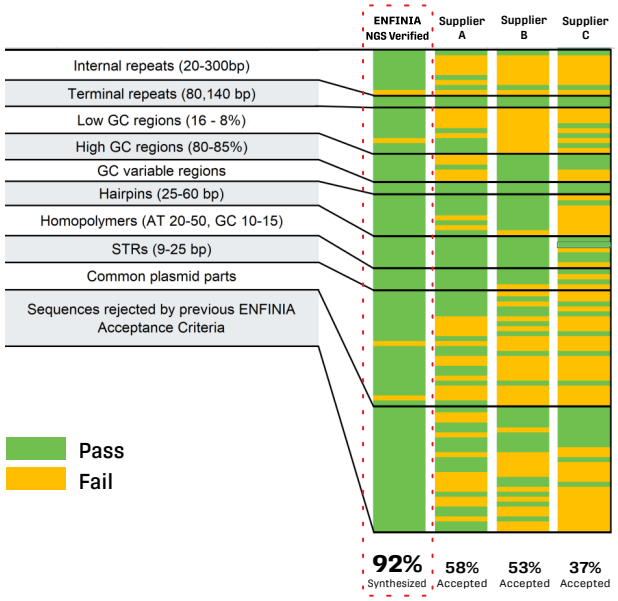
is produced in the United States and distributed globally

Save Time with NGS-Verified DNA that is 2x Longer and 20x More Accurate



ENFINIA DNA is high-accuracy, linear, double-stranded DNA at lengths up to 7kb with a per base accuracy of 99.999% and an error rate as low as 1:70:000 bp. In comparison to the published specifications of industry leading gene fragment suppliers, ENFINIA DNA is twice as long and over 20 times more accurate.

Get Access to DNA that Most Suppliers Reject



ENFINIA DNA - High Complexity

Highly complex DNA as fast as 10 business days

Successful synthesis of 90/98 sequences rejected by other suppliers, including:

- ITRs
- LTRs
- GC-rich promoters
- enhancers
- terminators
- hairpins
- long repeats

Cell-free, NGS-verified DNA Synthesis

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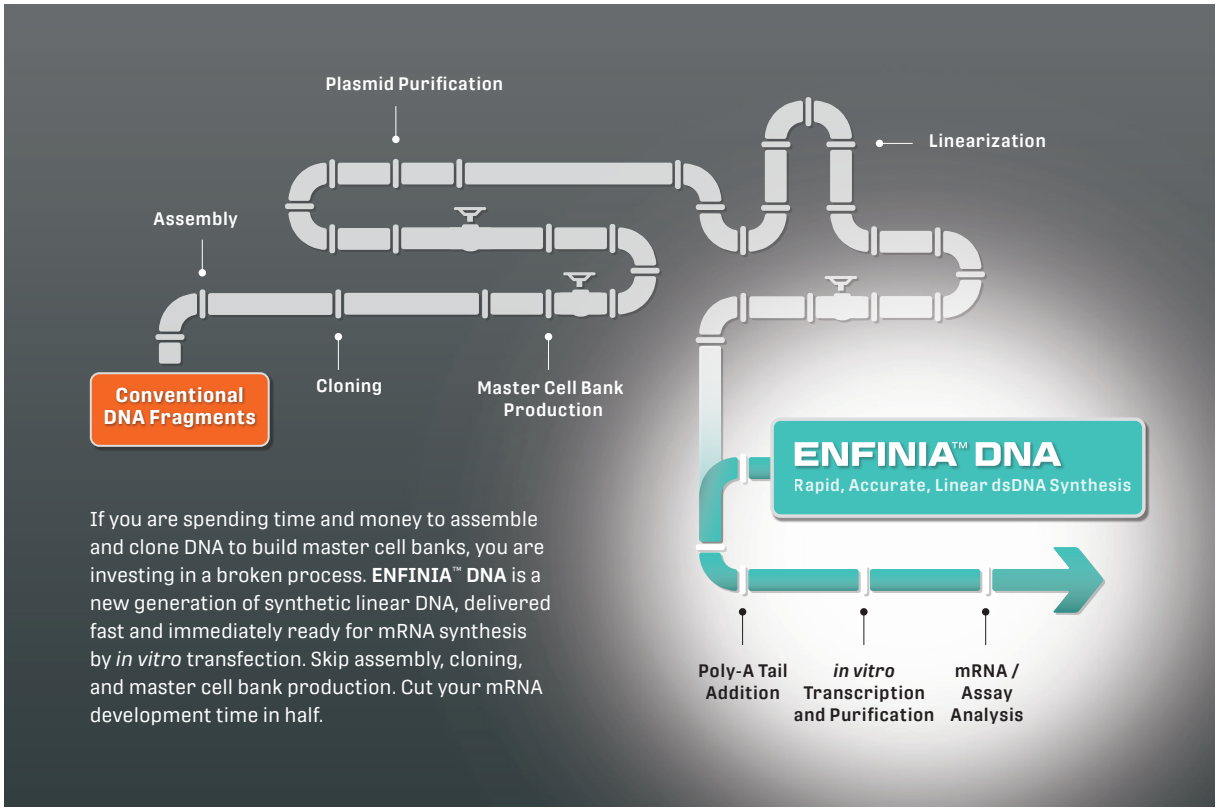
UNLOCK GENETIC MEDICINE DEVELOPMENT

by eliminating costly and time consuming cell-based workflows

Bypass Cloning and Master Cell Banks with Full-length, Accurate, Linear DNA



Proven To Save Time In Synbio Applications Including mRNA Vaccines and Cell & Gene therapy

Plant Engineering
- Regulatory sequences
- Pathway genes
- Transgenes
- Viral vector genes

C&G Therapy
- ITRs, promoters, enhancers
- Lentiviral packaging
- Promoter libraries
- Riboswitches
- Recombinant proteins

mRNA Vaccines
- Viral pathogen genes
- Viral antibodies
- Cas9, Cas13
- Viral vector parts
- Oncomarker genes

Metagenomics
- Fungal PKS pathway

Pathway Engineering
- Bacterial genes
- Fungal genes
- Metabolic pathways

CRISPR
- Immune system pathway
- Viral genes

Accelerate discovery with rapid denovo synthesis of new designs and variants

SEQUENCE ACCEPTANCE CRITERIA & SPECIFICATIONS

for ENFINIA Long, Complex, NGS-Verified DNA

Sequence Submission Acceptance Criteria

	ENFINA Standard Complexity	ENFINIA High Complexity
DNA Sequence Length	300-5,500 bp	300-7,000 bp †
Overall GC Content	25-65%	20-80%
100bp GC Content	22-75%	12-85%
Local GC Variation	Up to 60%	Up to 70%
Repeats	Up to 20 bp	Up to 150 bp
Homopolymers*	Up to 7 bases for G/C and 8 bases for A/T	Up to 15 bases for G/C and 30 bases for A/T

Specifications

1. ENFINIA DNA can be ordered at a standard synthesis yield of 1-3 µg or higher synthesis yields of 5-15 µg or 20-60 µg.
2. ENFINIA DNA is delivered as dried-down double-stranded DNA in a 96-well microplate, one sequence per well.
3. Each ENFINIA DNA sequence includes a 46bp adapter on the 5' end and 42bp adapter on the 3' end. Adapter sequences are provided.
4. Each ENFINIA DNA sequence is NGS-verified before shipment.

** The QC methods currently used for ENFINIA DNA production may not reliably measure homopolymer sequences longer than 10 bp. An accepted sequence containing homopolymers longer than 10 bp may contain molecules where the homopolymer is shorter or longer than expected.*

† Certain sequence complexities or combinations of complexities may not be compatible at lengths greater than 5,500 bp.

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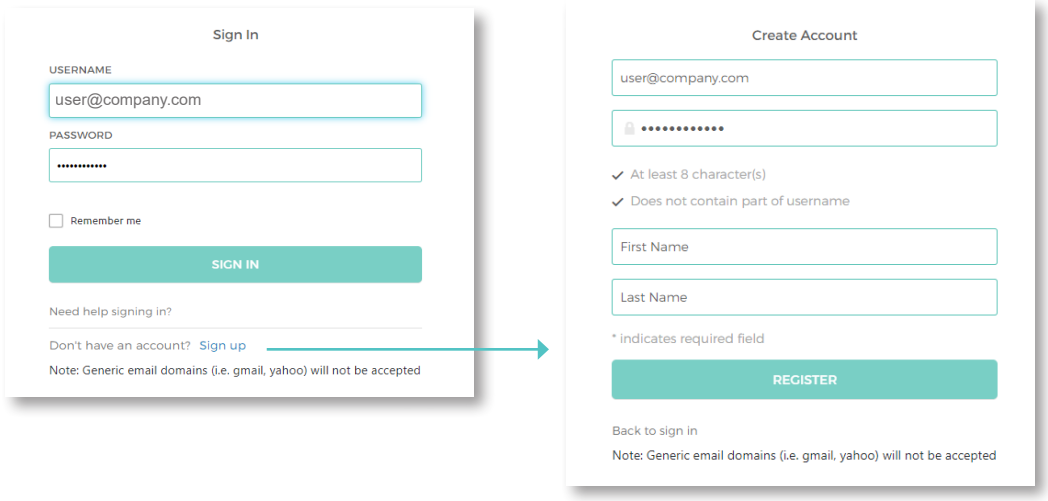
ORDER NOW FROM OUR ONLINE PORTAL

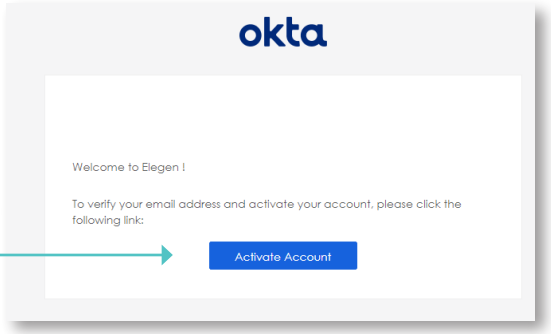
Visit ecommerce.elegen.com to review promotions, place and track your orders

1. Access Elegen's online ordering portal by visiting ecommerce.elegen.com
2. Create a new account from the welcome screen by clicking "Sign up"

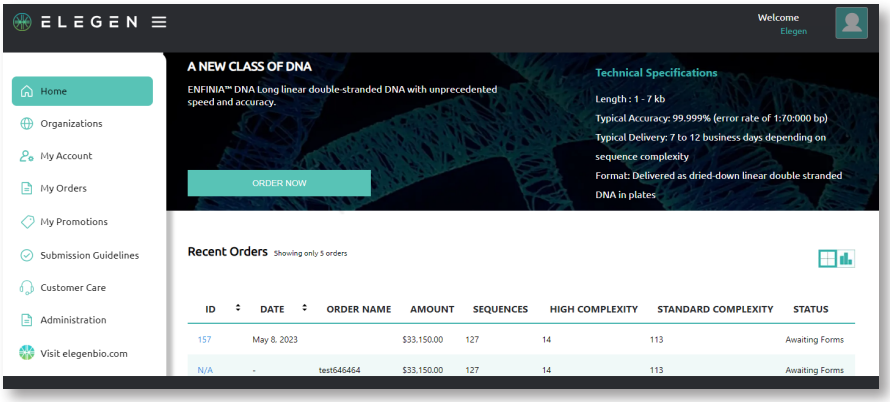


Non-corporate email addresses will not be accepted.

3. After clicking "Register", you will recieve an email from our account management system, Okta. Please do not forget to check your spam folder if you do not see it in your inbox. Click "Activate Account" (once) and return to the ordering portal to login.



4. After logging in, you can now place orders by clicking "Order Now", from the home screen. Use the lefthand sidebar at any time to access addition information:
   - Account information
   - Order history
   - Promotions
   - Sumbission guidelines
   - Customer care



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Elegen employs innovative technologies to all steps of DNA synthesis to deliver custom synthetic DNA with unprecedented speed, quality, and length to help the builders of our growing bioeconomy unlock programmable biology.

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