GENE SYNTHESIS SERVICES

Advancing life science and technology research through trusted DNA services since 1999

GENEWIZ®
Solid science. Superior service.

GENE SYNTHESIS SERVICES

Why struggle with cloning…

when we can build genes to your specifications?

GENEWIZ can synthesize codon-optimized cDNA, gene variants, artificially designed DNA, or any other sequence for your research. Simply provide a nucleotide or amino acid sequence. We will ship your desired gene cloned into your choice of plasmid.

GENEWIZ Gene Synthesis Service Overview

- Full Service — One-stop from sequence design, optimization, and synthesis, to cloning, verification by sequencing and restriction digestion, and plasmid preparation.
- Fast Turnaround — Approximately 2-3 weeks for <2 kb synthetic genes.
- Advanced Technologies — Proprietary technologies enable us to synthesize sequences with difficult regions like highly repetitive, and AT-rich or GC-rich DNA. Our bioinformatics platform optimizes your desired sequences for better expression tailored to your specific needs.
- Consultation & Support — Our Ph.D. scientists customize the approach to your exact specifications, and support you throughout the entire project.
- Competitive Pricing — Save time and reduce costs relative to in-house cloning, so that you can focus on your next discovery.
- Intellectual Property Security — GENEWIZ will not claim ownership of all related intellectual property.

Standard Deliverables

- 2 - 5 ug of lyophilized plasmid containing your desired synthetic gene
- Certificate of Analysis (COA) including restriction digest
- Sequence trace data with alignment
- Sequence of synthetic gene alone and in vector

Applications

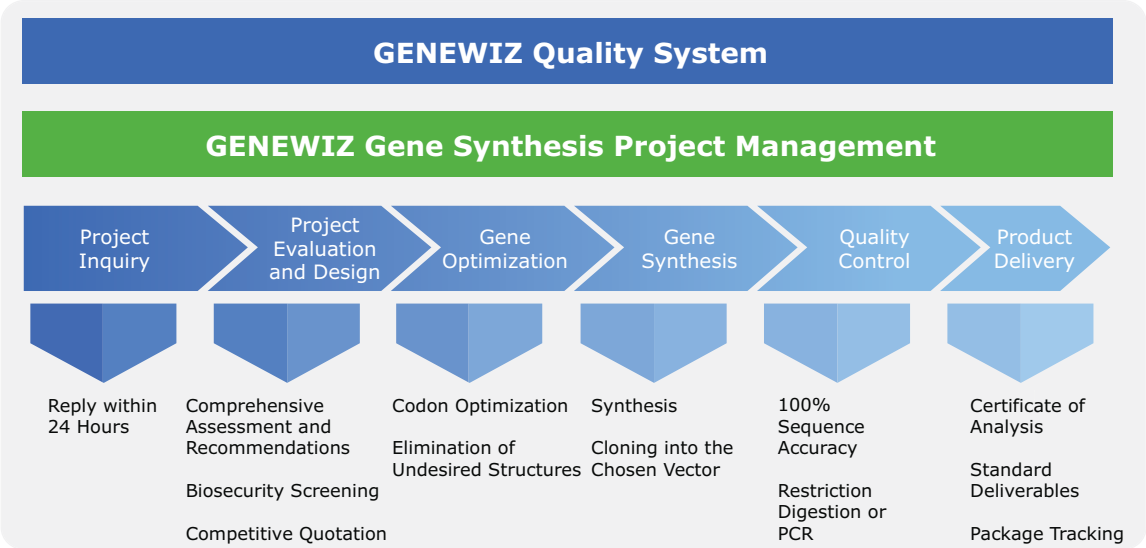
- Synthesize genes that are difficult to clone or lack a template
- Provide large-scale gene synthesis for microarrays
- Optimize codon usage to boost protein expression
- Synthesize or design predicted genes, spliced gene variants, SNPs, DNA vaccines, gene therapy vectors, and complex genes with high GC content or secondary structures
- Generate humanized antibodies or recombinant antibodies

PROJECT MANAGEMENT

GENEWIZ Project Managers Are the Difference!

We have a track record of superior project management and a stringent quality system. GENEWIZ's experienced project managers are dedicated to ensuring your project's success. Our approach includes the assurance of milestones for each stage of the process, and clear communication to keep you well-informed.

- Dedicated Ph.D. project managers in New Jersey
- Strong molecular biology background
- Regular project updates
- End-to-end support throughout



As former researchers, we understand that you need accurate and timely results to advance your research. We apply solid science and operational excellence to ensure that we are your trusted partner of choice.

See Customer Ratings of GENEWIZ Gene Synthesis	
Turnaround Time	100% Very Good to Excellent
Quality	100% Very Good to Excellent
Technical Consultation	95.4% Very Good to Excellent
Project Updates	95.4% Very Good to Excellent

GENE SYNTHESIS vs CLONING

Gene Synthesis Speeds Up Cloning Projects

Are you frustrated with the slow pace of your traditional cloning project? Try gene synthesis!

Compare traditional cloning with GENEWIZ's Gene Synthesis Service to see why gene synthesis is a better choice:

Traditional Cloning	Gene Synthesis at GENEWIZ
Lengthy, Complex Procedure	**Short, Simple Procedure**
1. Cloning strategy design 2. Primer Synthesis 3. PCR and restriction enzyme digestion 4. Gel extraction and ligation 5. Transformation and plasmid miniprep 6. Screen by enzymatic digestion 7. Sequencing reaction preparation 8. Sequence assembly analysis ***Troubleshoot if any of the above steps fail***	1. You provide the sequence 2. You receive the gene in your choice of vector, ready for the next experiment
Challenges	**Advantages**
× Requires a physical template × Can make only one or a few changes × Labor intensive × Unpredictable results × Troubleshooting drains your reagents and time	√ No physical template needed √ Codon optimize or custom design your gene √ Reliable delivery by GENEWIZ Ph.D. experts √ Project turnaround starts from 2 weeks

"I'm very satisfied with GENEWIZ's custom gene synthesis service. I like the thorough communication and the status updates. The price is very competitive."

Comment from GENEWIZ Customer

How do you Synthesize Genes?
Single-stranded oligonucleotides are designed, synthesized, and assembled using different protocols depending on the sequence characteristics. The assembled full-length gene is subsequently cloned into the vector pUC57, and the insert is verified by DNA sequencing and restriction digestion.

GENE SYNTHESIS FAQ

Up to what length sequence can GENEWIZ synthesize?

We can synthesize gene sequences from 100 bp to 50 kb, using short DNA oligos as building blocks.

Can you synthesize sequences with high GC content or repeats?

Yes. GENEWIZ's proprietary technologies enable us to synthesize sequences with difficult regions. Our bioinformatics platform can optimize your gene for synthesis. We carefully review every sequence, and provide a custom quote including turnaround time and price.

Can you clone the synthetic gene directly into my vector and save the step of cloning into your standard vector?

We are happy to clone your sequence into your own vector.

How to Order

1. Go to www.genewiz.com. Please create an account if you do not have one
2. Login and create a Gene Synthesis Order
3. GENEWIZ will contact you within one business day to discuss your project in detail

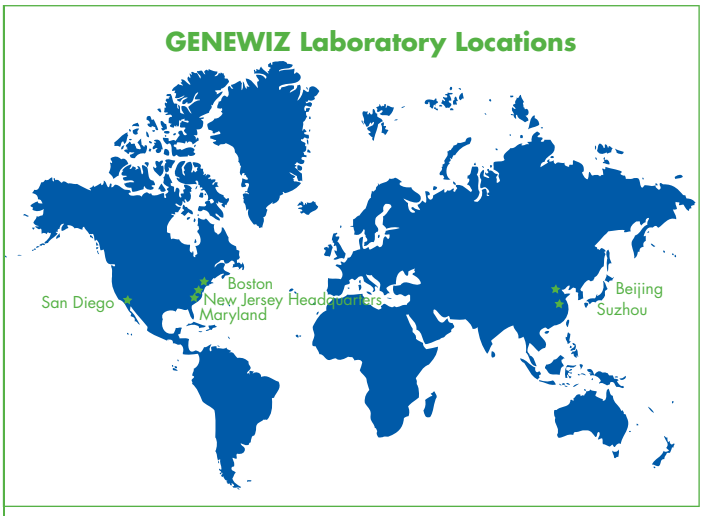
If you need the synthetic gene cloned into your own vector, please send GENEWIZ the vector DNA and pertinent information to the following location:

Attn: Gene Synthesis
GENEWIZ, Inc.
115 Corporate Blvd.
South Plainfield, NJ 07080

What is your recommended DNA resuspension protocol?

The sample tube from GENEWIZ contains approximately 2 - 5 µg of lyophilized plasmid DNA. To resuspend it, we recommend:

1. Spin the tube briefly to ensure that the contents are at the bottom of the tube.
2. Resuspend the sample in a volume appropriate for your needs (such as 20-50 µL for ~0.25 to ~0.1 µg/µL) of either sterile, high purity water or TE (resuspension solution depends on your downstream applications; TE may interfere with various enzyme manipulations).
3. Vortex briefly, let sit 2-10 minutes on ice, then vortex again.



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