GenSmart™ 2.0 Online Ordering

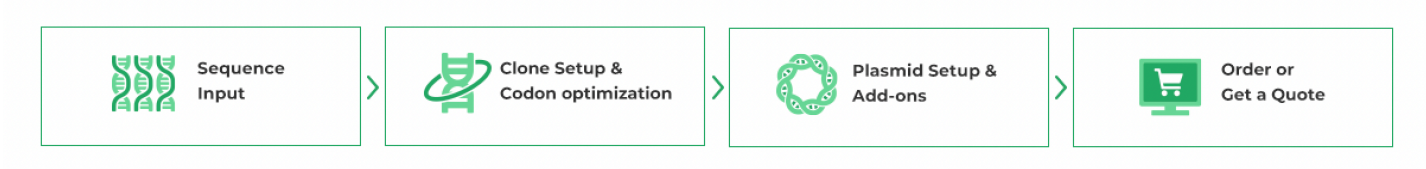
Quick User Guide

The GenSmart™ 2.0 online ordering platform is an integrated online order center for all your signature molecular biology services. With this top-notch platform, ordering has never been easier.

Experience a seamless journey as you input, edit, and optimize your gene sequences, while conveniently ordering gene synthesis and plasmid DNA preparation services tailored to your specific needs. The platform features the best-in-class GenSmart™ codon optimization tool, allowing you to optimize sequences with a single click.

Discover the best services at the most competitive prices, perfectly matched to the requirements of your downstream applications when you use GenSmart™ 2.0. To help you make the most of this advanced platform, this quick user guide is prepared with essential tips and highlights of its exceptional features.

Workflow Overview



Order Gene Synthesis via GenSmart™ 2.0 with Ease

- ✓ Utilize the best-in-class codon optimization algorithm to optimize your sequence
- ✓ Select the most suitable gene synthesis services for your applications
- ✓ Receive estimated pricing and turnaround time
- ✓ Get an instant quote and place your order

1. Sequence Input

- Select “Start to order” for gene synthesis from the GenSmart™ 2.0 online ordering platform (see Figure 1).
- Input your nucleotide and/or amino acid sequences by uploading sequence files or entering the sequences manually (see Figure 2). GenSmart™ 2.0 accepts Excel, CSV/TSV, and FASTA files for uploading your sequences, and you can find the file templates on the right side of the page (see Figure 3).
- Once sequences are input, click “Continue” to proceed to the basic setting page for clone setup and codon optimization.

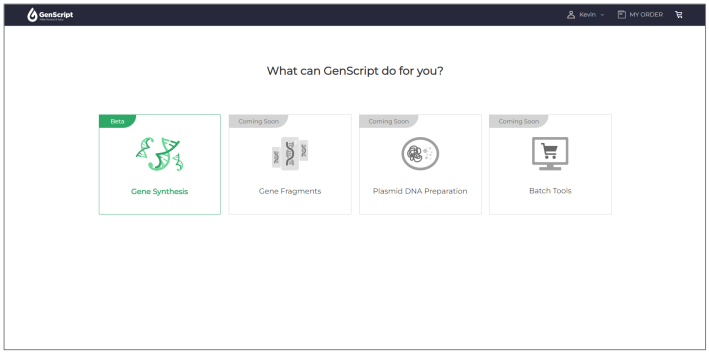


Figure 1: GenSmart™ Online Ordering Platfrom. Order and quote gene synthesis and plasmid DNA preparation services in only 4 simple steps, as well as connect and get support from our Ph.D. level experts.

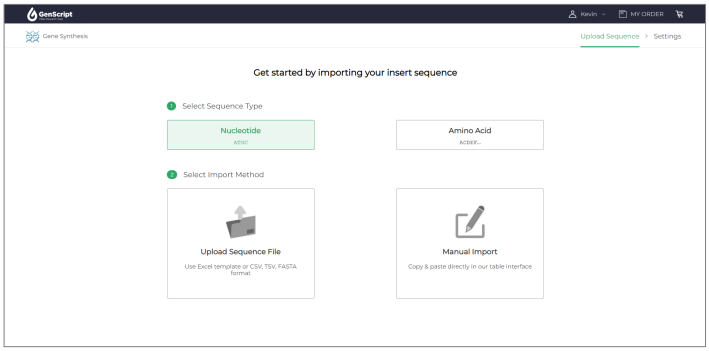


Figure 2: Sequence Input. Input nucleotide or amino acid sequence by uploading sequence files or manually input.

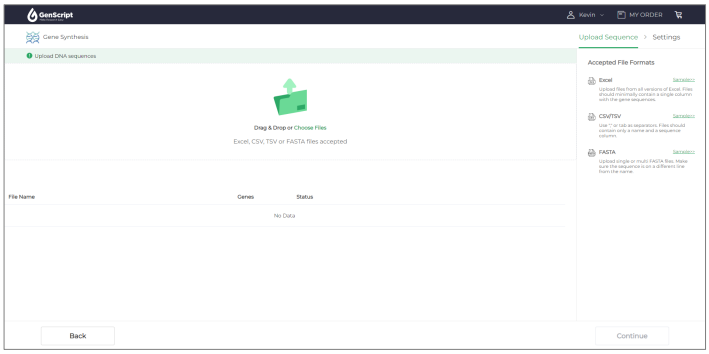


Figure 3: Upload sequence file. Drag & Drop or choose files to upload the sequence files. The templates of Excel, CSV/TSV, and FASTA files are available on the right side of the page.

2. Clone Setup and Condon Optimization

- Choose a clone vector, or expression vector, or use a previously archived vector for your sequences. You can apply the chosen vector to one sequence or select "Batch Change Vector" to apply them to all selected sequences in the order (see Figure 4).
- Once the vector is applied, choose the cloning methods from restriction enzyme cloning or seamless cloning methods in the “5’ RE” and “3’ RE” columns on the sequence table.

  ⓘ *If you opt for the seamless cloning method, remember to add homology arms to the 5′ and 3′ ends of your sequences. For restriction enzyme cloning, include the specific restriction site sequences at the 5′ and 3′ ends of your sequences.*
- GenScript's bioinformatics analysis API will assess the synthesis complexity and feasibility of your sequences. Check the "Status" column for results (see Figure 5).

  ⓘ *Look out for red error signs and yellow warning signs, as they indicate issues that need to be addressed before processing your order. Click on the signs to view the details.*
- Click on the sequence to edit your sequence, and click “Codon Optimization” to optimize your sequence using best-in-class codon optimization algorithm (see Figure 6). Select the region of your sequence that requires optimization, the host organism, and the restriction sites to keep and/or avoid and then click “Continue” to start the codon optimization (see Figure 7).

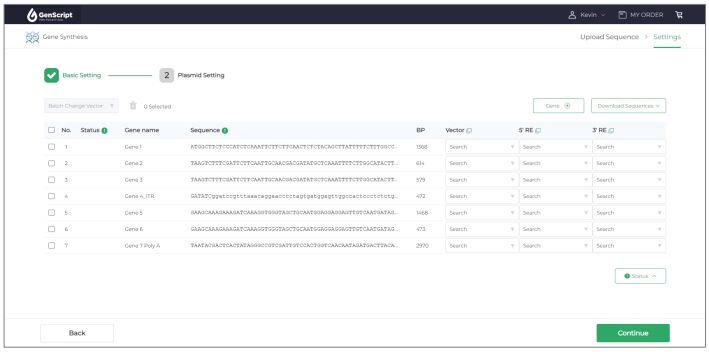


Figure 4: Basic setting page. After the input of the sequences, you can choose the vectors and the cloning methods.

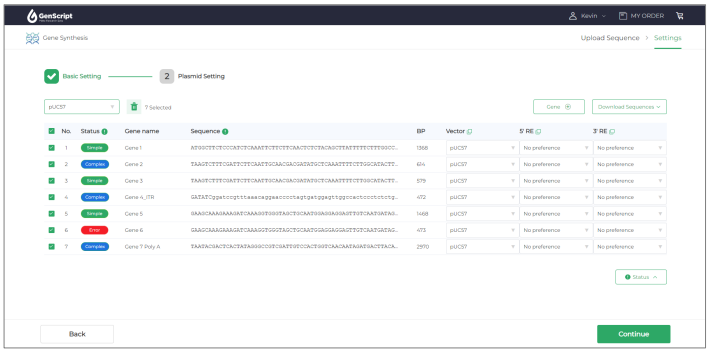


Figure 5: Sequence status. Once the vector and cloning method are determined, the sequences will be automatically analyzed for synthesis complexity and feasibility using GenScript's bioinformatics analysis API.

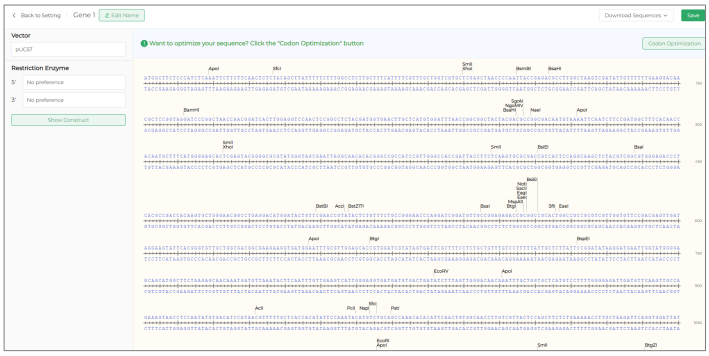


Figure 6: Edit sequence. Click on the sequences to jump into sequence editing page.

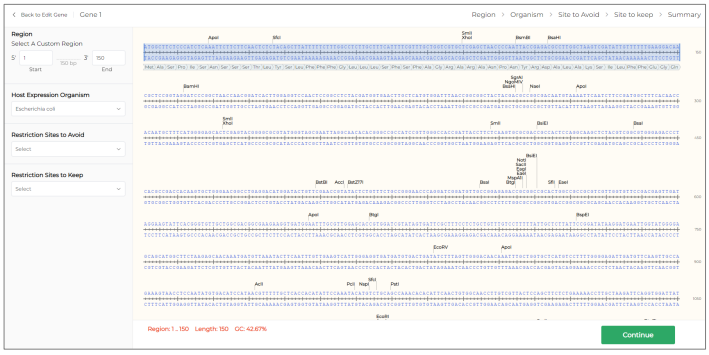


Figure 7: Codon optimization. Select the region, host organism, and restriction sites to keep and/or avoid before codon optimization.

3. Plasmid Setup and Add-ons

- Select the desired quantity, supercoil level, and endotoxin level based on your downstream application requirements (see Figure 8).

- Choose the delivery format for your plasmid DNA and, if needed, add glycerol stock and optional QC tests (see Figure 9).

  ⓘ *Please note that if your sequences contain Poly A structure or AAV ITR structure, Poly A guarantee and AAV ITR guarantee services are available to add to your order to ensure the complete and accurate Poly A and AAV ITR structure on your deliverables.*

Figure 8: Quantity, supercoil level and endotoxin level settings. Depends on your application, choose the most suitable options of your plasmid DNA.

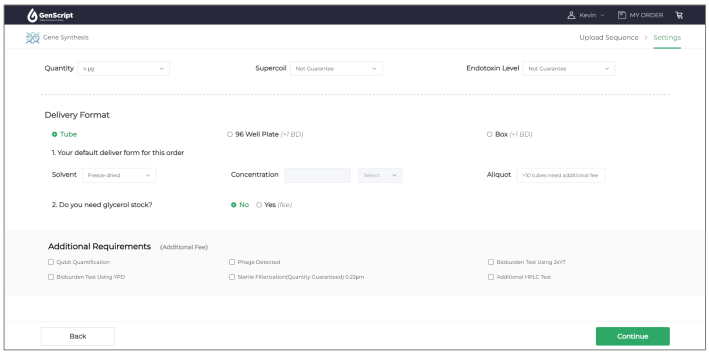


Figure 9: Delivery format and additional requirements. Select the delivery format and add more QC tests for your plasmid DNA.

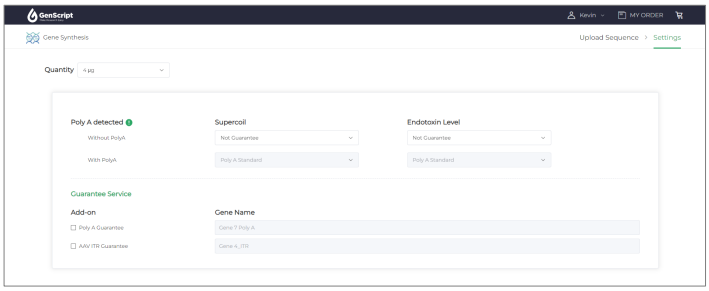


Figure 10: Poly A guarantee and AAV ITR guarantee add-ons. Add guarantee services to ensure the complete and accurate structure in your sequences.

4. Order or Get a Quote

- Choose from the **fastest** – rocket service, the **most popular** – premium service, or the **best value** – basic service to determine the production time of your order (see Figure 11).

  ⓘ *After selecting the right option for you, the order summary, available coupons, turnaround time, and estimated cost will be shown on the right side of the page (see Figure 11).*

- To add new addresses or edit existing ones, click "Management" next to the shipping address and billing address. For the shipping option, click "Edit" to select your preferred choice (see Figure 12).
- Once you have everything set up, click "Order Now" to place your order, or if you prefer to receive a quote first, click "Get Quote" to request a quote for your order.
- You can use the existing payment method, or add new a new payment method on the payment page (see Figure 13).
- To keep track of your ongoing and past orders as well as quotations, click "My Order" at the top of the page (see Figure 14).

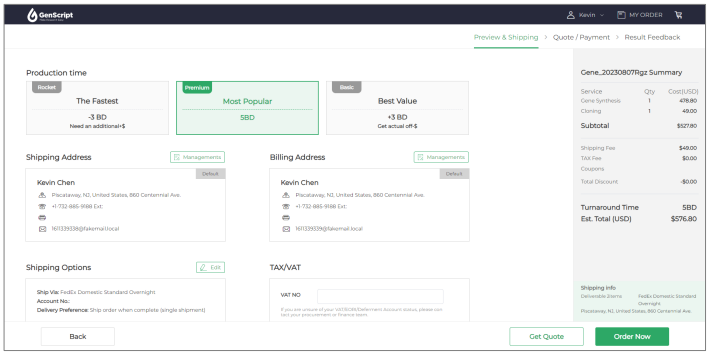


Figure 11: Production time options. Choose the right service option for you with different costs and turnaround times.

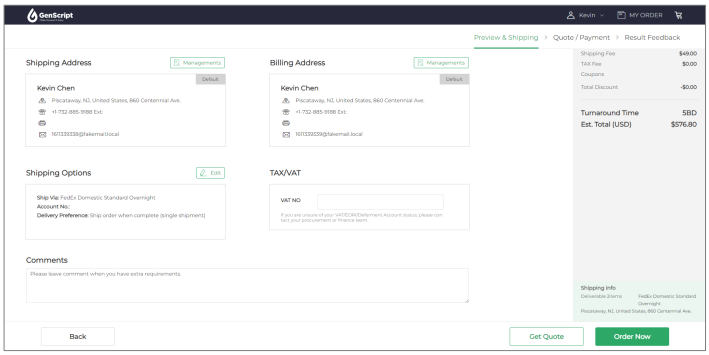


Figure 12: Shipping address, billing address and shipping options. Fill the shipping address and billing address, as well as select the shipping options for your order.

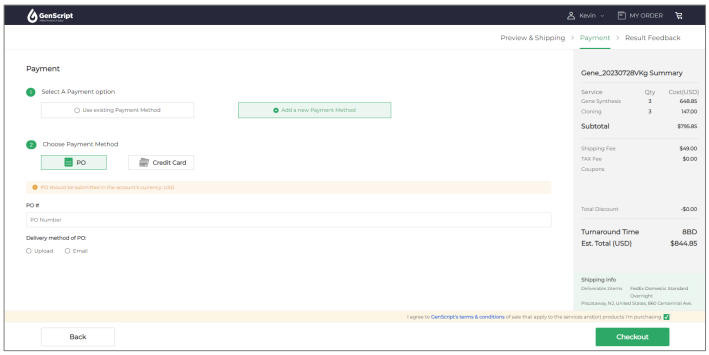


Figure 13: Payment. Use existing payment method, or add new a new payment method.

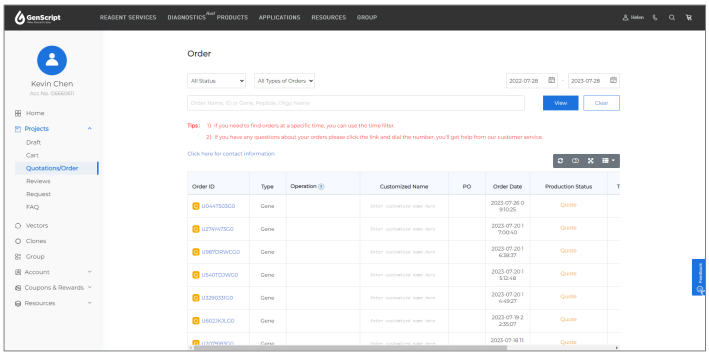


Figure 14: Order and Quotation summary page. Find all your orders and quotations on one page.

Note: All sequences and associated prices shown here are for demonstration purposes only. For accurate pricing and production times, please log in with your account and get your quote via GenSmart™ 2.0 online ordering platform.

Learn more at genscript.com