

AI-Enabled Protein Production One-Stop Solution



At Synbio Technologies, we go beyond proteins; we push the boundaries of what's possible in your lab. Our comprehensive, AI-powered solutions streamline your protein development process, from **codon optimization** and **gene synthesis** to **vector selection**, **expression system screening**, **protein purification**, and **functionality validation**.

Simply provide the protein sequence—we handle the rest, bringing your AI-driven protein designs to life with unprecedented speed, precision, and efficiency.

OUR ONE-STOP SOLUTION INCLUDES



Codon Optimization: Enhance expression with our NG Codon technology, optimized for your specific expression system.



Gene Synthesis & Cloning: AI-enhanced DNA synthesis, 100% accurate and advanced vector design platforms.



Expression System Screening: Access to bacterial, yeast, insect, and mammalian hosts for tailored expression.



Recombinant Antibody Expression: Cover all stages of antibody discovery by integrating antibody genes sequence, de novo antibody design, **antibody humanization**, **recombinant antibody expression**, monoclonal antibody preparation and polyclonal antibody preparation.



Scalable Protein Production: Flexible production options, from micrograms to grams, to support projects of any size.



Quality & Functional Validation: Comprehensive testing ensures reliability, activity, and functionality of the final protein or antibody product.



Syno GS Platform

Provides AI-enhanced DNA synthesis, ensuring 100% accurate genes for your research.

Syno R Platform

Specializes in RNA oligo synthesis, offering various modifications and delivery options.

Syno Ab Platform

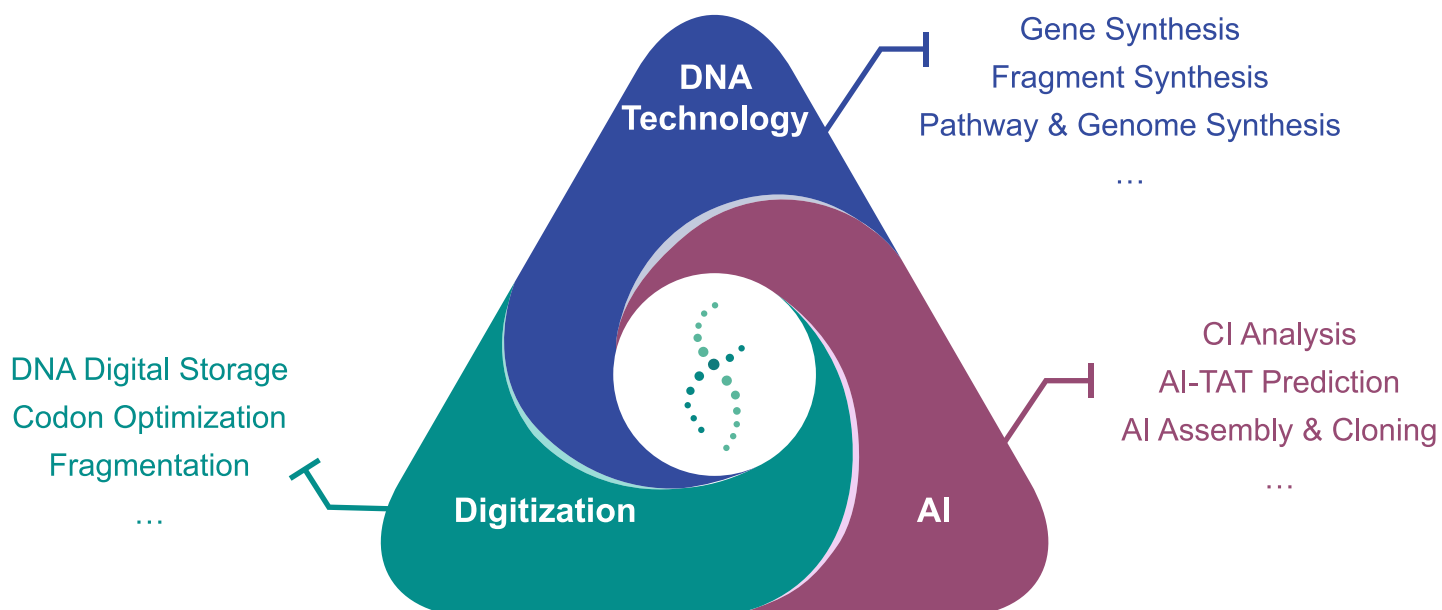
Utilizes AlphaFold to optimize antibody design and interactions, streamlining antibody discovery.

Syno Protein Platform

Offers scalable protein expression systems with optimized codons for efficient, high-purity protein production.

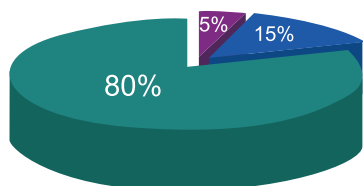
Syno GS Platform: AI-Driven Deep DNA Synthesis

Our Syno GS platform features a variety of intelligent biological analysis tools, including NG Codon, Complexity Index (CI), and AI-TAT. You only need to provide the nucleotide or amino acid sequence you wish to synthesize, and we will deliver a 100% accurate gene sequence - cloned into your specified vector. Precise gene sequences can improve the accuracy and efficiency of protein expression.

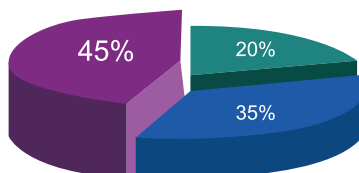


Complexity Index

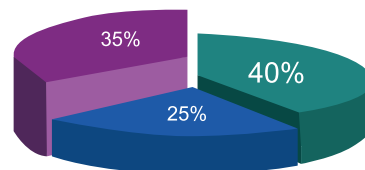
Synbio Technologies



Supplier 1



Supplier 2



Normal

Complex

Unsynthesizable

NG Codon

Before Optimization



T: Test

After Optimization



C: Control

M: Marker

AI-TAT



Predicting Outcomes

Sequence Length: **2,000**

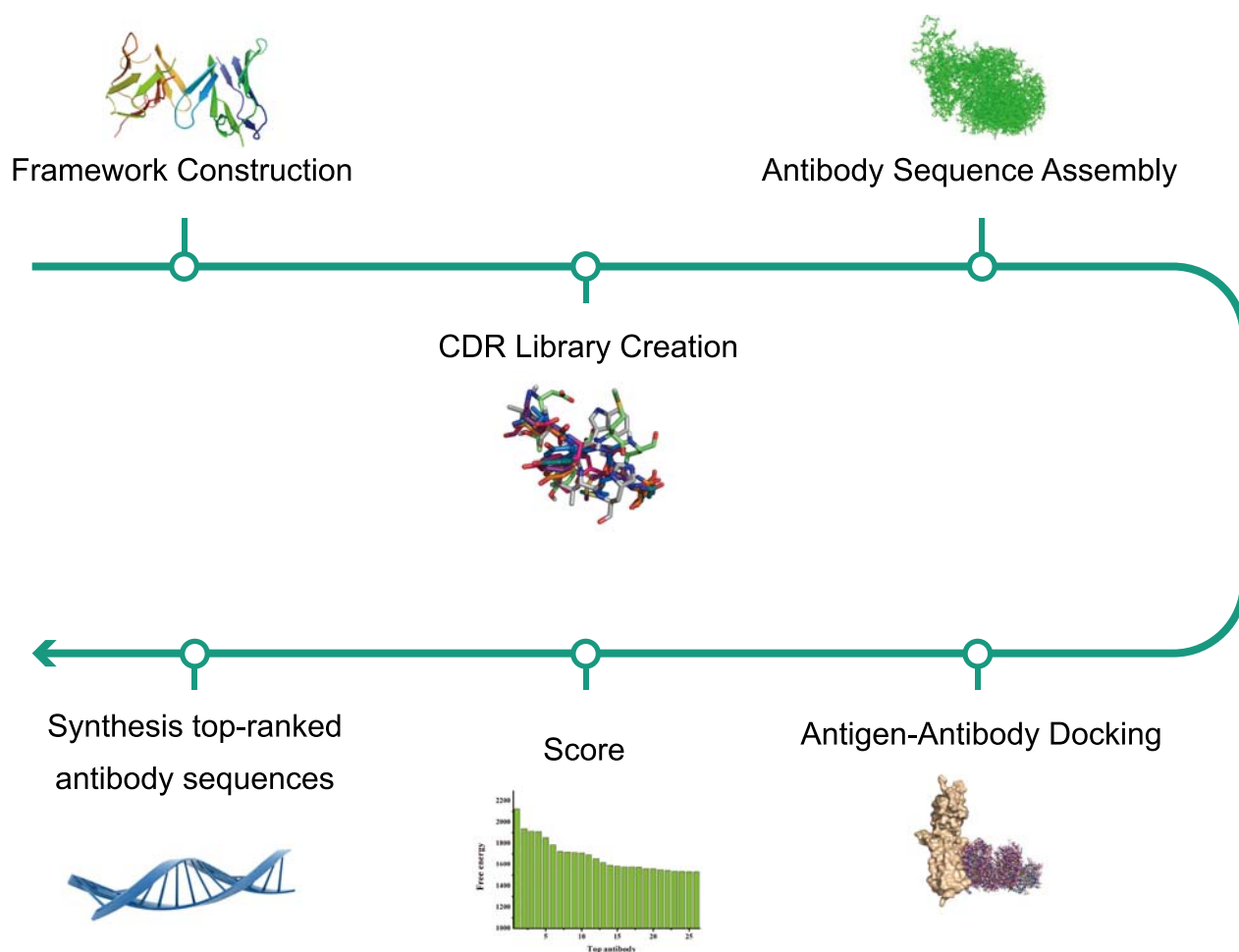
Turnaround Time: **10** Business Days

GOT IT

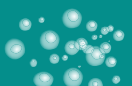
AI-Driven Deep DNA Synthesis

Syno Ab Platform: Enabling Antibody Discovery

AlphaFold excels at predicting protein structures but cannot simulate the changes in proteins interacting with other proteins or drug molecules. Synbio Technologies' Syno Ab antibody platform addresses this limitation by using the antigen structures predicted by AlphaFold as a starting point. Supported by antibody biological medicine biocomputing, it effectively simulates antigen-antibody docking, combining computational technology with experimental approaches to help researchers significantly reduce the overall costs of antibody development and shorten the development cycle.



Expression System Comparison

	 Bacterial	 Yeast	 Insect	 Mammalian
Post-Translational Modification	-	++	++	+++
PTM, folding	+	+++	+++	+++
PTM, glycosylation	-	++	++	+++
PTM, phosphorylation	-	++	++	+++
Turnaround time	2-3 Weeks	4-7 Weeks	5-9 Weeks	3-4 Weeks
Cost	Low	Middle	Middle	Middle
Yield (mg/L)	Range from 1-5 mg/l	Range from 0.2-50 mg/l	Range from 0.2-50 mg/l	Range from 1-3 mg/l
Recommended applications	• Therapeutic proteins • Industrial enzymes • Antigens • Functional & structural research	• Vaccines • Glycosylation research • Secretory protein expression	• Enzymes • Glycosylation research • Activity analysis • Secretory protein expressio	• Pharmaceutical protein production • Transmembrane proteins • Recombinant antibodies • Secretory protein expression • Functional and structural research

Synbio Technologies offers a complete one-stop solution for researchers, simplifying the journey from digital sequence to experimentally validated protein products. With our services, you only need to provide the protein sequence - Synbio handles every detail, from codon optimization and gene synthesis to expression system selection, protein purification, and functional validation.



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