

Pathway Synthesis

Achieving Superior Outcomes with Advanced Synthesis

By mastering the art of metabolic pathway construction and pioneering diverse DNA assembly technologies, we empower your research in microbiology, biochemistry, and more. Elevate your natural product development to unprecedented heights with our proven scientific solutions.



Our industry-leading metabolic engineering and synthetic biology expertise has transformed high-value natural product development.



Benefit from our advanced DNA assembly technologies, essential for cutting-edge work in microbiology, biochemistry, and beyond.

Services	Turnaround Time	Deliverables
Metabolic Pathway Synthesis	<10Kb, 4-6 Weeks; >10Kb, Inquire	Plasmids with synthesized metabolic pathway and glycerol bacteria
Metabolic Pathway Library Assembly	Varies depending on the pathway requested	Plasmid library after assembly and glycerol bacterial library, or monoclonal plasmids and glycerol bacteria

Deliverables & Requirements

What You'll Get

- Plasmids for synthetic metabolic pathways
- Sequence validation results
- Certificate of Analysis (COA)

What We Require from You

- Nucleotide or amino acid sequences for synthesis
- Plasmid information

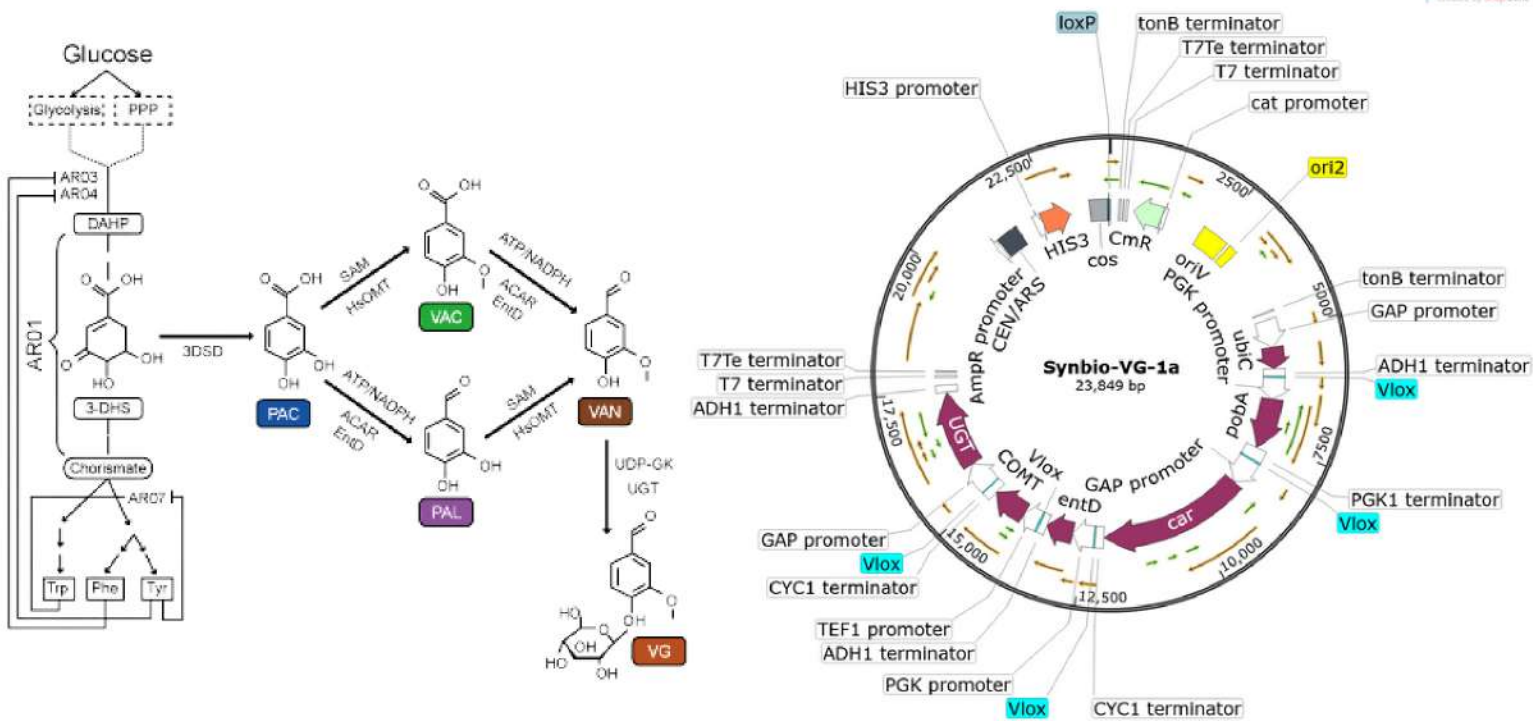
Advanced Technologies, Expertise, and Commitment to Quality

- **Efficient Synthesis:** Rapid gene synthesis using our Syno GS Gene Synthesis and High-Throughput DNA Synthesis Platform Technology, with large-scale capacity and precision for long DNA strands up to 20 Kb.
- **Customization and Precision:** Tailored genetic library storage and assembly, focusing on complex metabolic pathways.
- **Metabolic Pathway Expertise:** Specialization in constructing tailored metabolic pathways with advanced tools for efficiency and accuracy.
- **Proven Reliability:** High success rates in clone production and PCR testing, ensuring accurate and reliable results.

Maximizing Output and Precision

Synbio Technologies' Successful Expression of Glucose to Vanillin with High Fidelity

Our gene expression platform, engineered for *Saccharomyces cerevisiae*, exemplifies our dedication to advancing biotechnological methodologies. Utilizing codon optimization strategies, we have adapted genes from diverse origins to align with the unique genomic characteristics of *Saccharomyces cerevisiae*. This process involved the strategic design of distinct promoters and terminators, integrating them to establish a unified gene expression framework. Employing the pSynoYAC0 shuttle vector, our approach has streamlined the assembly and transformation of these optimized genomes into *Saccharomyces cerevisiae*. The resulting data indicates robust protease expression within the low-copy Yeast Artificial Chromosome (YAC) vector, alongside efficient metabolic conversion from glucose to vanillin. These findings mark a significant contribution to the dynamic field of biotechnological engineering, showcasing our system's efficacy in complex biosynthetic applications.



Connecting the Dots: Seamless Upstream and Downstream Services for End-to-End Support

