

Clonal Genes

100% accurate DNA. As fast as 4 business days.

At Twist Bioscience, we recognize the pivotal role that fast, high-quality, and dependable gene synthesis plays in keeping your research moving. That's why we ship 100% accurate cloned genes in as fast as four days*, prepped to your specification, ready to drop into your downstream workflow. Our silicon-based synthesis platform delivers sequence-perfect DNA reliably, regardless of scale or complexity.

Our Clonal Genes are specifically tailored to your research needs. Configure your project directly in your Twist account: choose a vector from our catalog or onboard your own, set your prep scale, purity grade, and delivery format.

Orders do not ship unless we confirm your insert is 100% accurate to your design. Each order ships with a Certificate of Analysis, giving your sourcing and QA teams the documentation they need to qualify Twist as a supplier.

When timelines are tight, opt for our Express Service and achieve your goals even faster.

KEY BENEFITS

Your sequence, your way

You choose:

- Plasmid vector: catalog or custom
- Insertion site
- DNA scale
- Buffer & normalization
- Transfection-grade or endotoxin-free
- Tubes or plates
- Glycerol stocks

Reliable, predictable turnaround time

- Express starts at 4 business days*
- Standard starts at 10 business days*
- Complex Genes start at 15 business days*

Transparent ordering and pricing

- From 9¢ per base
- Streamlined online ordering and real-time order tracking
- PhD-level consultation for building and optimizing gene sequences

Quality and compliance, documented

- 100% sequence-perfect, NGS-verified and guaranteed
- Certificate of Analysis (COA) with every order
- Animal-origin-free (AOF, BSE/TSE) certified
- Endotoxin-free options (<0.1 EU/μg)
- Carbon footprint just 0.16% of conventional synthesis

Performance data

TURNAROUND TIME

Keep projects moving with predictable timelines on every order, regardless of scale, complexity or sequence length.

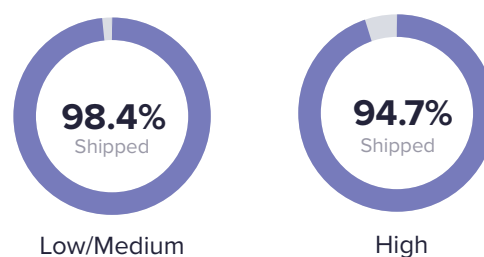
Microprep turnaround time

	Average	Median
Express	6.1 BD	5 BD
Standard	9.4 BD	9 BD

SUCCESS RATE

Every DNA order is routine and reliable, with 98.4% manufacturing success on low and medium complexity sequences. Genes only leave the factory when NGS verified as a 100% match to your desired sequence.

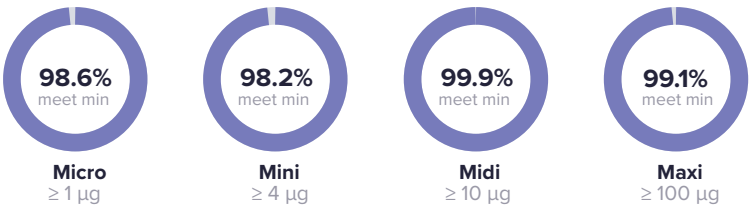
Clonal gene manufacturing success rate



Items meeting advertised minimum yield
High-copy vectors

YIELD

Get reliable yields at every prep scale, backed by fluorometric quantification and a minimum delivery guarantee.



Complete product details

SPECIFICATION	VALUE	DETAILS
Sequences		
Product format	Circular dsDNA	
Length	0.3 kb – 7.0 kb	
Complexity	Low Medium High	A sequence's complexity score is based on the combined presence, frequency, and length of various features within the design of a sequence. Impacts the ease and speed of production. High complexity sequences are produced through a series of specialized manufacturing workflows. Supported features include: • Short tandem repeats: 3–9bp repeats in up to 100bp stretches • Long tandem repeats: repeats up to 200bp • Inverted (palindromic) repeats: up to 100bp • Localized GC extremes: 10–90% within a 50bp window • Sequence-wide GC extremes: 25–75% • Stable secondary structures: hairpins, G-quadruplexes
Codon optimization	100s of target organisms	Large language model-driven for protein expression.
Synthesis and cloning		
Express service (Low/Medium complexity) ADD-ON	4 – 7 business days	At default scale (Micro). Larger scale preps may increase turnaround time.
Standard service (Low and medium complexity only)	10 business days	At default scale (Micro). Larger scale preps may increase turnaround time.
Standard service (High complexity)	15 business days	At default scale (Micro). Larger scale preps may increase turnaround time.
Vectors	• 65+ catalog vectors • Unlimited custom vectors	Includes cloning, expression, and IVT vectors. View our catalog. One-time onboarding for new custom vectors with unlimited use thereafter.
Custom vector onboarding ADD-ON	10 business days	Learn about custom vector onboarding
Synthesis platform	Silicon chip (proprietary)	
Synthesis chemistry	Phosphoramidite (proprietary)	Reagent and energy consumption are 0.16% that of contemporary gene synthesis methods, due to our use of miniaturized silicon chip chemistry.
Carbon footprint	~18 kg CO ₂ e per gene	
Animal-origin-free manufacturing ADD-ON	AOF, BSE/TSE	Animal origin free certification is included with your order.

(chart continued next page)

SPECIFICATION	VALUE	DETAILS
DNA preparation		
Prep scales ADD-ON	Default: Micro: 1 – 4 µg Add ons: Mini: 4 – 10 µg Midi: 10 – 100 µg Maxi: 100 µg – 1 mg	Midi and Maxi scale: +3 business days
Target yield ADD-ON	Minimum or exact yield	Available at Mini scale.
Purity grade ADD-ON	• Molecular grade • Transfection grade (<10 EU/µg) • Endotoxin-free (<0.1 EU/µg)	• Micro: molecular grade (included) • Mini: molecular grade (included) • Midi: transfection grade (included) endotoxin-free • Maxi: transfection grade (included) endotoxin-free
Concentration normalization ADD-ON	0.25 – 1.0 mg/mL	Available at Midi and Maxi scale.
Glycerol stock ADD-ON		
Delivery format ADD-ON	Dried down or resuspended	• Lyophilized • Elution buffer • TE buffer • TE buffer low EDTA • Nuclease-free water
Container	• 2 mL tube • 96-well plate (regular/ deep well) • 384-well plate • 1.4 mL Micronic tube • 4 mL Micronic tube	Micronic tubes and deep well plates available at Midi and Maxi scales.
Shipment conditions	Ambient or frozen on dry ice	Ambient: Dried down DNA Frozen: Resuspended DNA, Glycerol stocks
Quality control	Every Clonal Gene we ship includes a Certificate of Analysis (COA) that contains the following information.	
Yield measurement	Fluorometric quantification	
Sequence identity	100% match	
Sequencing method	NGS (long and/or short read)	
Poly-A analysis ADD-ON	NGS (long read)	

*This timeframe refers to the typical processing and handling time within our facilities before your order is handed over to the shipping carrier. Gene Fragments are shipped in 2-4 business days. Eligible Express Genes ship in 4-7 business days. Average turnaround time for Clonal Genes is 10 business days. Our target completion timeline for Clonal Genes scored as complex is 15 business days. Turnaround time for Clonal Genes is subject to change based on customizations and sequence complexity. New vector onboarding for Clonal Genes will add additional turnaround time. Orders placed outside of the US will incur additional delivery time. Turnaround time is shown at the default Micro prep scale, and includes synthesis, cloning, and DNA preparation. It increases with select options and at the Midi (10–100 µg) and Maxi (100 µg–1 mg) DNA prep scales. Endotoxin specification: molecular grade (no endotoxin specification), transfection grade (<10 EU/µg), endotoxin-free (<0.1 EU/µg). Specifications reflect the current product catalog and supersede prior revisions.

YOU DESIGN IT, WE BUILD IT. Get in touch at sales@twistbioscience.com or learn more at [twistbioscience.com](https://www.twistbioscience.com)

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