



TWIST BIOSCIENCE

# Clonal Genes

Twist Bioscience is transforming gene synthesis, a process at the core of synthetic and molecular biology. Our silicon-based DNA writing platform significantly increases gene synthesis throughput and scalability, while also reducing turnaround time and price per base.

Think on a new scale in your gene designs, and accelerate your discoveries.

### CLONAL GENES SPECS

- 0.3–5.0 kb
- 100% accurate NGS-verified gene sequences
- Cloned into a Twist Vector or your vector of choice
- 50 ng–2 µg

### KEY BENEFITS

#### Your Sequence, Your Way

- NGS-verified clonal perfect genes
- Choose from a wide variety of Twist Vectors or vector of your choice

#### Industry-Leading Price & Rapid Turnaround Time

- From 9¢ per base
- 11 to 17 business days

#### Scalable Synthesis

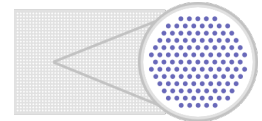
- No minimum order size
- Same turnaround regardless of order size

## Design. Build. Test.

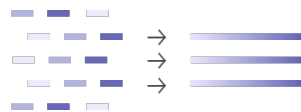
### Design



### Oligo Synthesis on Silicon Platform



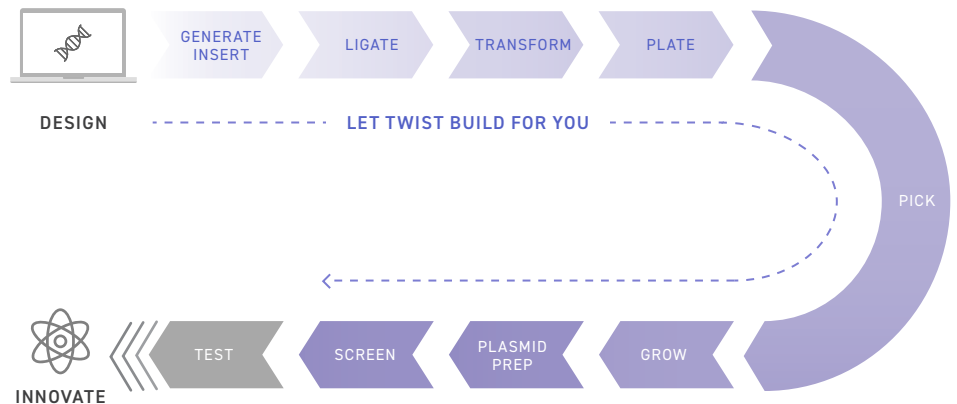
### Fragment Assembly



### Cloning and NGS Verification



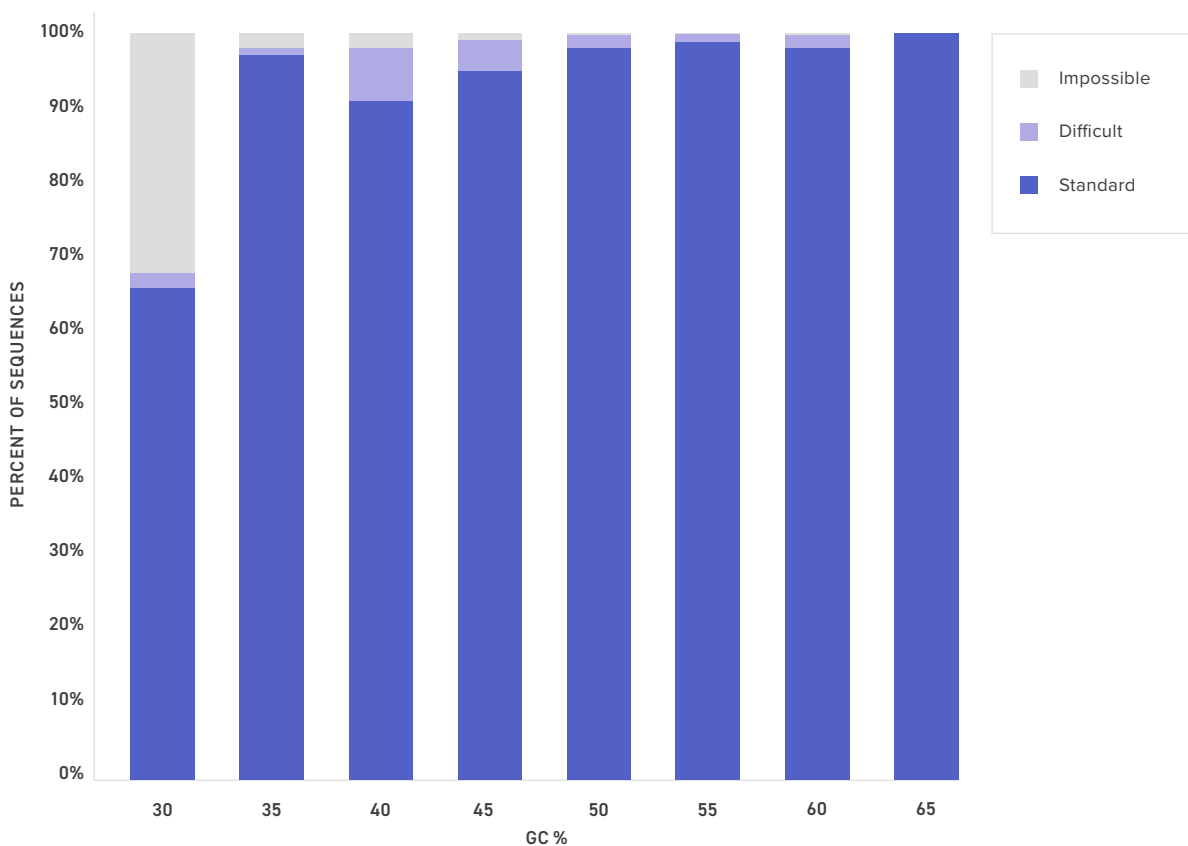
## Why Clone?



## We Are Rewriting DNA Synthesis

By implementing machine learning and data-driven algorithms, we have optimized gene synthesis. Different oligo design approaches and assembly conditions increase the success rate of synthesizing genes, especially for difficult targets. This process allows faster turnaround times to delivery since more genes are synthesized correctly in the first attempt, and makes even the most difficult genes within reach.

## Expanded Gene Design Possibilities



**Figure 1.** Each gene sequence we receive is scored based on sequence complexity. Parameters that influence complexity include presence of repetitive sequences, regions of high homology, and GC content. Our machine learning experience and proprietary design and assembly algorithms enable synthesis of a wide variety of gene sequences. >99% of the sequences we analyze are accepted for synthesis, including a broad range of GC content, enabling synthesis of even the most challenging gene sequences.

## Perfect Sequence for 1 or 10,000 Genes, or More

Twist Bioscience's platform processes tens of thousands of clones per month. Genes of various lengths and difficulty are written with high frequency of perfect NGS-verified clones. Silicon-based production enables high scalability, resulting in high quality DNA synthesis and assembly for individual genes or thousands of genes. With more high performance tools at your fingertips, experimental designs can be expanded.

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