



Gene Synthesis

Application Examples of Gene Synthesis

- Codon optimization to boost protein expression.
- Replace PCR cloning.
- Large-scale production of cDNA fragments for microarray chip.
- Clone humanized mouse antibodies or recombinant antibodies.
- Synthesize cDNAs for which the corresponding mRNA sources are difficult to obtain.
- Synthesize predicted genes/cDNAs.
- Synthesize genes or cDNAs that are difficult to clone.
- Synthesize alternatively spliced gene variants, SNPs, or any other variant type.
- Design gene therapy vector or genes.
- Design DNA vaccines.
- Design your own genes/cDNAs (deletion, mutation, and rearrangement etc.).
- Modify your gene for structure-function studies in enzymology and receptor biology.

The key features of GeneCust Technology:

1. **Minimum cost. Our price is low, request a quote.** We priced our service very competitively to minimize your cost. Our fee for service is very straightforward, without future obligation. You retain all rights to your sequence data and related intellectual property. Price for gene synthesis is less expensive even compared with PCR cloning.

Size of Gene	Price
Minimum Order	€150/gene
>minimum order	Start at 0.34 euros/base

Mutant production service : for one "wild" gene ordered, design one or several mutants for 175 € each (contact us for conditions).

* For complex sequences, please contact us for a quote.

* Free cloning into our standard vector pUC57 or pBluescript IISK+, and there is a €160 extra charge for subcloning into a customer vector.

2. **Fast Turnaround Time:** For genes up to 1 kb, average turnaround time is 14 business days.

3. **Codon and RNA Secondary Structure Optimization service:** We will provide free optimization service if you order the optimized gene at our list price. GeneCust use a proprietary algorithm to optimize sequences for protein expression using either your own codon usage table or those from publicly available codon usage database. This algorithm converts your amino acid sequence into a DNA sequence with overall codon usage similar to a specified organism, and also optimizes the RNA secondary structure. Using our optimized synthetic genes, many of our customers have reported dramatic increase on protein expression.
4. **Absolute confidentiality:** GeneCust will sign non-disclosure or confidentiality agreements if needed.
5. **Guaranteed Quality:** Synthetic genes will be confirmed base-by-base using automated bi-directional fluorescent DNA sequencing, and we guarantee 100% match with your requested sequences. The typical delivery includes around 4 µg of lyophilized plasmid DNA which contains your gene in your desired vector and sequence data documenting the DNA sequence of each clone.
6. **Flexibility:** GeneCust can synthesize any gene or sequence, and clone it into our standard vector (pUC57 or pBluescript IISK+). GeneCust can subclone the synthetic gene into a vector provided by customer for a €160 extra charge.

Contact us for quotation and further information:

You can contact us by phone (+352 27620411) or e-mail (info@genecust.com).

Codon Optimization

You may use our email to submit sequence for optimization and synthesis. In your message, please include:

- Protein or ORF DNA sequence.
- Intended host expression system.
- Restriction enzyme cutting sites at both ends.
- Restriction enzyme cutting sites that you want to avoid in the optimized sequence.
- Restriction enzyme cutting sites that you want to keep in the original sequence