

# Gene Synthesis 2015

## GeneCust Europe

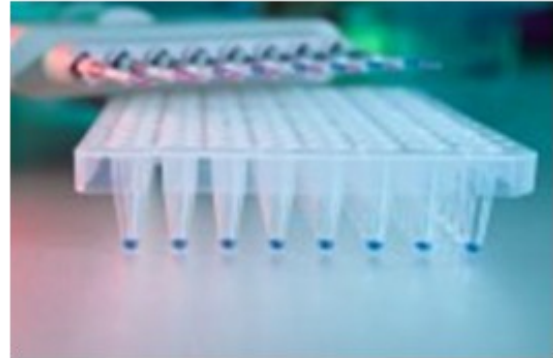
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# Gene Synthesis

## Leading Supplier

With highly experienced staff biologists dedicated to gene synthesis, GeneCust has become one of the largest suppliers for gene synthesis services in Europe. For the past 5 years, GeneCust has synthesized thousands of genes to customers worldwide. Benefiting from our oligo expertise and DNA sequencing knowledge, GeneCust offers gene synthesis at the most affordable prices. So far, we have satisfied and impressed our customers from leading biotechnology, pharmaceutical industries to famous academic institutions.



## Competitive Prices and fast Turnaround

### Gene Synthesis Services and Pricing

Optimization is free of charge.

Further discounts for large projects and long term contracts are available. Discount rates are based on total number of base pairs of your gene order. Discounts on long term contracts are also available.

Our shipping fee is 25 euros.

Genes are cloned into our standard vectors **pUC-SP**, **pUC57** or **pBluescriptlISK+** for free.

If customer desires to clone the gene into specified cloning vehicle, an additional fee of 145 euros will be charged.

Following vectors are in stock at GeneCust : **pET17b**, **pET24b**, **pET26b+**, **pET28a+**, **pET28b+**, **pET32a+**, **pCDNA3.1+**, **pCND3.1-**, **pCI-neo**.

Single stranded sequencing of final product is free of charge. .

Size of gene	Price (euro) **	Timeline
Gene < 3 kb	0.28 / base pair	0-1 kb : 10 business days 1-2 kb : 15 business days 3 kb : 20 business days
Gene 3kb - 5 kb	0.33 / base pair	4-5 kb : 25 business days
Gene > 5 kb	0.36 / base pair	Please inquire
Custom Cloning Fee*	145	5 business days
Mutagenesis Fee*	145 / mutation point	Please inquire
Minimum Synthesis Fee*	140	10 business days

\* please check conditions with your GeneCust representative

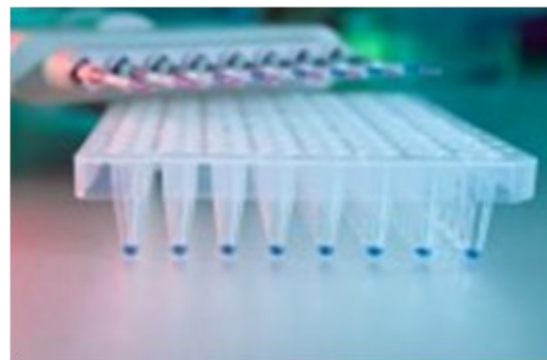
\*\*Standard sequences only. Sequences with repeats, high or low GC contents, please inquire about turnaround. Turnarounds are estimates.

Terms and Conditions apply

# Gene Synthesis

## EXPRESS Gene Synthesis Service

Need gene fast ? Then try our EXPRESS Gene Synthesis service. We deliver your custom designed gene sequence in as few as 8 business days. This service is not applicable to genes with complex sequences and is limited to genes <2kb. Genes are cloned into puc57 vector.



### Deliverables

- 4 µg of lyophilized pUC57 containing your gene insert
- Sequencing chromatograms covering your gene (electronic)
- Complete sequence for your gene inserted into pUC57 (electronic)
- Quality assurance certificate

Size of gene	Price (euro)	Timeline**
Gene up to 500 bp	0.75 euro / base pair (minimum synthesis fee apply)	8 business days
Gene 500 bases - 1kb	0.75 euro / base pair	8 business days
Gene 1 kb—2 kb	0.75 euro / base pair	12 business days
Minimum Synthesis Fee*	140 euros	

\* please check conditions with your GeneCust representative

\*\*Standard sequences only. Sequences with repeats, high or low GC contents, please inquire about turnaround. Turnarounds are estimates.

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## Codon Optimization

Codon and RNA Secondary Structure Optimization service:

We will provide free optimization service if you order the optimized gene as gene synthesis service. GeneCust has developed 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.

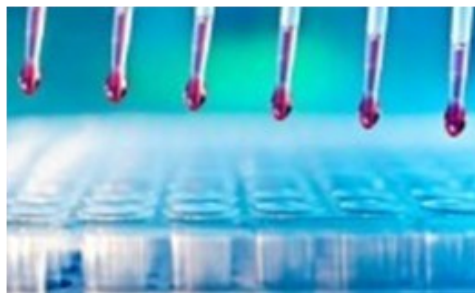
You may submit your sequence for optimization and synthesis by email. In your message, please include:

- 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

We always submit optimized sequences for customer validation before we proceed with synthesis. Customer can always ask for changes.

## 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.



## Guarantee Commitment

GeneCust offers a 100% DNA Sequencing Accuracy Guarantee. Each gene is confirmed base-by-base by sequencing and is guaranteed to match 100% with your requested sequence.

- Quick Turnaround Guarantee
- Lowest Price Guarantee
- Absolute Confidentiality Guarantee

GeneCust will sign non-disclosure or confidentiality agreement upon request. GeneCust is solely a service provider for gene synthesis. After three months, copy of your synthetic gene will be destroyed.

## Gene Synthesis Terms and Conditions

### Terms :

GeneCust will deliver to customer 4.0 µg plasmid DNA containing gene of interest. Synthetic DNA will be cloned in pUC or pBluescript vector and provided in lyophilized powder form. Along with the final gene product, GeneCust will provide chromatogram sequencing results, gene report, alignment file, complete nucleotide sequence of the plasmid (cloning vector) including the sequence of the gene insert, and restriction digestion analysis results. All these documents will be sent to you electronically.

No gene synthesis is initiated without a PO number. GeneCust accepts wire in payment. Payment term is net 30 days.

### High GC Content Genes and Highly Repetitive Genes :

In case of genes with high GC content (including regional high GC content genes), as well as highly repetitive genes, GeneCust reserves the right to deliver genes within a more reasonable time frame. The new time frame will be discussed with customer prior to start of gene synthesis. GeneCust may also refuse to accept any order by notifying customer orally or by written notice if the order is technically difficult to accomplish.

### Custom Cloning Vehicle :

GeneCust will charge an extra 145 euros to subclone the genes of interest into customer's desired cloning vehicle. Customer must provide detailed sequence information pertaining customer vector. Any incorrect or false information provided by customer may lead to significant delay of the project. In this case, GeneCust is not responsible for the delay or any consequences caused by the delay.

If subcloning fails due to circumstances beyond control, GeneCust will deliver the final gene product in pUC57. Subcloning fee will NOT be charged to customer due to incompleteness of subcloning process.

### Genes with Expression Toxicity :

In the event that a designed DNA fragment is toxic to the E.coli host in which it is grown, GeneCust reserves the right to provide 20µg of sequence-verified full length PCR fragment in place of plasmid DNA. Customer agrees to pay the full invoice amount.

### Genes that Fail To Be Synthesized in Full Length in Standard Vector or as a PCR Fragment :

GeneCust makes best effort to synthesize the full length gene in our standard vector pUC57 or pBluescriptII SK+. Should GeneCust be unsuccessful in generating the full-length sequence in the standard vector or as a full length PCR fragment (due to sequence instability, toxicity, GC rich areas, repeats, etc.), client is not obligated to make ANY payment to GeneCust. Should client be willing to receive sequence-verified PCR fragments, GeneCust reserves the right to ask a proportion of the original price (up to 50%) to cover labour and material cost.

## Patents :

GeneCust serves as a service provider and offers synthesis services of sequences provided by the customer. It is the sole responsibility of customer to verify whether their respective work is result of any infringements of any patents. GeneCust expressly disclaims any liability in this regard.

## Inspection Policy :

Upon receipt of shipped goods, customer shall inspect the shipment promptly for damages, shortages and correct identity of product. Any product that is not identical to the requested sequence will be replaced or authorized for return and credit, at our option. Any claims must be submitted within 3 months of shipment.

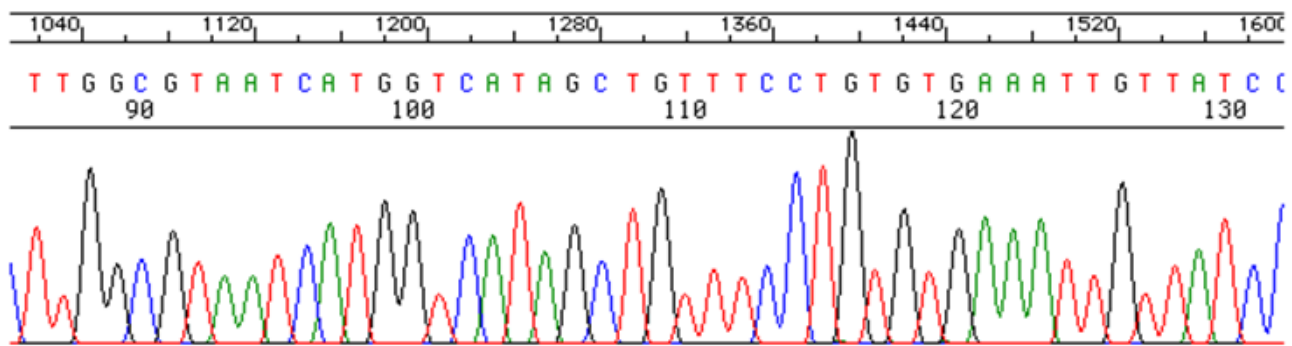
## Warranty :

GeneCust guarantees 100% accuracy and match of genes requested. Any claims must be submitted within 3 months of shipment. At the time of shipment, GeneCust keeps a single copy of the gene for unexpected incidents and/or disputes. After 3 months, this copy of the gene will be destroyed permanently. GeneCust reserves the right to refuse handling disputes after period of 3 months.

## Cancellations :

For any genes, customer may cancel the order after reaching an agreement with GeneCust.

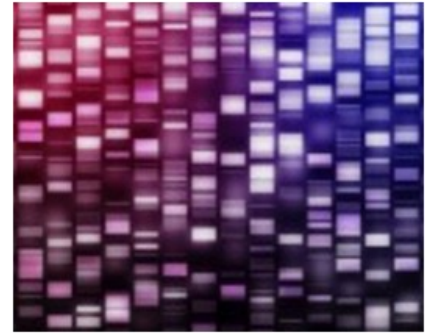
1. If GeneCust has received the order, but has not initiated the project, customer is entitled to cancellation of the order without any penalty.
2. If GeneCust has prompted oligo synthesis, but not cloning and/or thereafter, customer may cancel the order, however, customer is obliged to pay 25% of the original price to cover labour and material cost.
3. If GeneCust has prompted oligo synthesis, and has started cloning and/or thereafter, customer may cancel the order, however, after agreement with GeneCust Customer is obliged to pay penalty cost, depending on the stage or status of the project.
4. If GeneCust has obtained the correct sequence within specified time frame, customer may cancel the order, however, with full amount paid to GeneCust .



## How to order

Request a quote by email at [info@genecest.com](mailto:info@genecest.com)  
Download Gene Synthesis Order Form on [www.genecest.com](http://www.genecest.com)

Email Order Form at [info@genecest.com](mailto:info@genecest.com)  
Or send it by fax at +352 27620412



## Instructions for reconstitution

1. Before opening the tube containing the DNA, please briefly centrifuge the tube. Lyophilized DNA could attach to the wall of the tube. Opening without centrifugation could cause DNA loss.
2. The lyophilized polynucleotide is stable at -20°C for at least 1 year. Polynucleotide dissolved in TE is stable for at least 6 months at -20°C or 4°C. Polynucleotide dissolved in water is stable for at least 6 months at -20°C in the absence of nucleases. Be sure the water used is at neutral pH to avoid depurination. Polynucleotide dissolved in water is NOT STABLE at 4°C.

### 3. Recommended protocols for re-planting

A) Re-suspend lyophilized polynucleotide (4ug) in 40ul of 10mM Tris (pH 8.5). Final concentration is ~100ng/ul. This is the original stock. Please note, 4ug is an approximate amount. To accurately determine the quantity of DNA present, please measure by optical density at OD260nm.

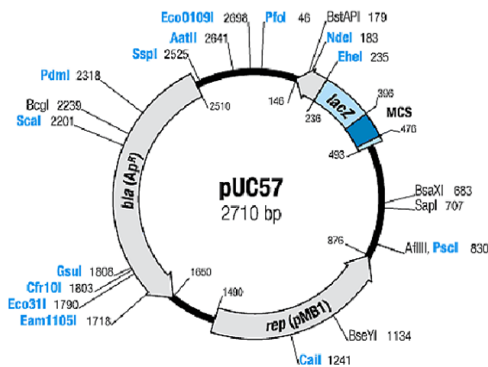
B) In a new microcentrifuge tube, make a 1: 10 dilution of original stock in 10mM Tris (pH 8.5). This is 1:10 diluted stock.

C) To plate DNA, transform 2ul of original stock DNA and 2ul 1:10 diluted stock DNA into appropriate E.coli competent cells. Incubate mixture on LB agar plates (with desired antibiotic selection) at 37°C for overnight.

D) Select a well separated, SINGLE colony and inoculate in LB medium with desired antibiotic selection for large culture.

NOTE: IT IS IMPORTANT TO SELECT ONLY A SINGLE COLONY.

E) Purify DNA from large culture. Verify sequences and continue with project of interest.



If you encounter any problems, please do not hesitate to contact us. We will be more than happy to assist you.



# GeneCust

**Custom Services for Research**



Thank you for your time.