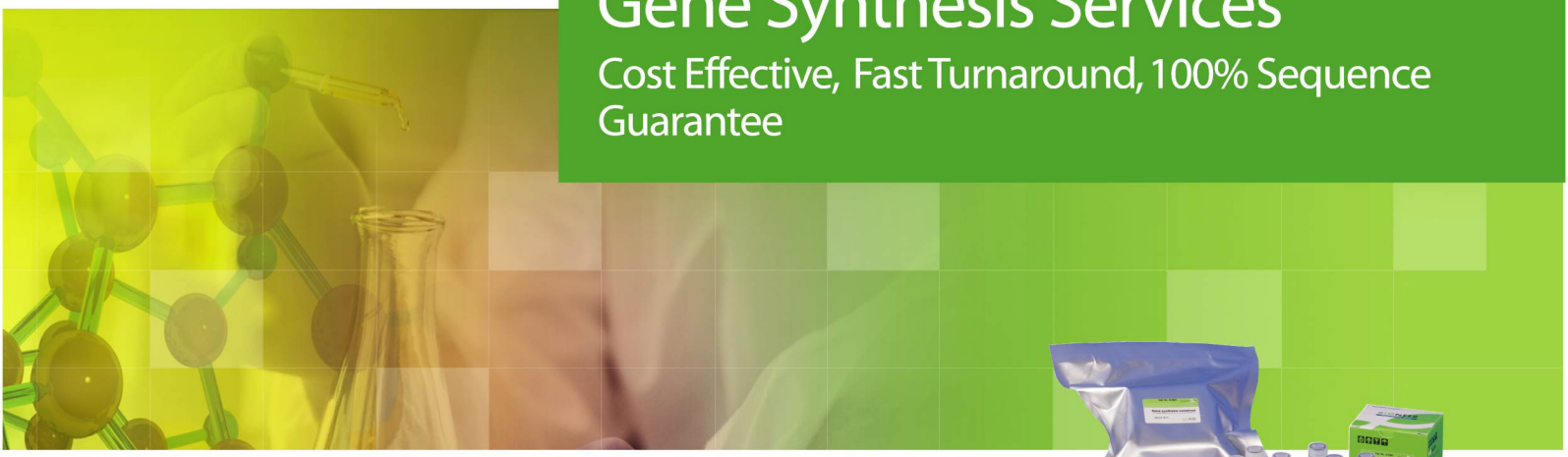
BIONEER
Innovation • Value • Discovery

Gene Synthesis Services

Cost Effective, Fast Turnaround, 100% Sequence Guarantee



Gene synthesis is the most cost effective way to enhance your research. In as little as 2 weeks, you can have your gene cloned in hand and 100% sequence guaranteed.

Save Time and Money

Bioneer's great pricing means that it can cost less to order a synthetic gene from us than to buy all the kits and reagents necessary to PCR, ligate, clone, grow, purify and sequence your gene of interest. And with no cloning for you to do, you can focus your efforts on more important aspects of your research.

Designer Genes

If you like, our free codon optimization using Bioneer's GeneAdvantage™ software can be used. Genes optimized using GeneAdvantage™ show increased protein expression rates and enhanced protein function. In addition our optimization can make previously un-clonable sections of DNA easy to work with.

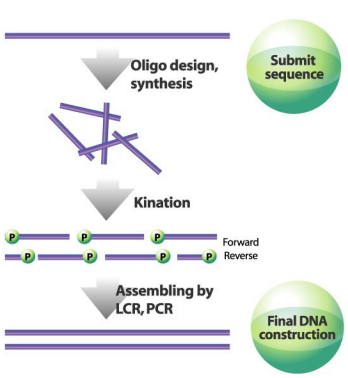
Quality Results - Guaranteed Sequence

Each gene is supplied cloned in the vector of your choosing and is sequenced on both strands to give you the confidence you want when working with your genes.

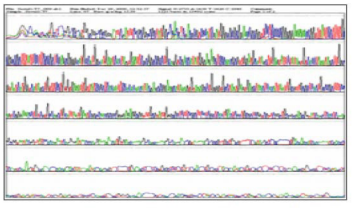
Other Services

Bioneer also offers point mutation as well as cloning and subcloning services. Bioneer strives to provide the highest quality synthetic genes at a great price. Our goal is to always provide you with the best value for your research dollar.

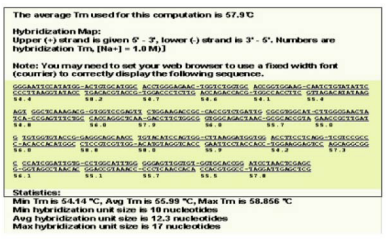
- Schematic of synthesis



- Sequence Validation



- Real Data about a Sample Gene



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GeneAdvantage Software

Bioneer's exclusive GeneAdvantage software does much more than just optimize for the codon bias of a given organism. Other parameters are taken into account that can significantly enhance the expression of your gene(up to 100-fold) and increase its functionality. Some of the parameters optimized by GeneAdvantage include:

- **Codon usage and bias**
- **mRNA secondary structure**
- **Stable free energy of mRNA**
- **Cryptic splice sites**
- **Reducing repetitive elements**
- **Removing internal restriction sites**
- **Custom motifs (Poly-A, GC Islets, Etc.)**
- **Premature PolyA sites**

Applications

Antibody Construction

Antibodies targeted toward specific diseases or targets can be codon optimized for maximum expression in the host organism. Also, an antibody library can be constructed to screen for the most efficient antibody variant.

Organism Production Optimization

Optimize expression of genes related to resource production to maximize industrial biological production efficiency.

Gene Construction

Get difficult-to-obtain DNA sequences without a template and upgrade the quality of your research by constructing hypothetical genes.

Protein Modification

Codon optimization with Bioneer's GeneAdvantage software can increase protein expression efficiency, and a mutant library derived from this process can yield proteins with increased function. Optimizations include secondary structure removal, and repeat reduction as well as organism optimizations.

Point Mutation

The fastest and most cost effective way to construct a mutant library for protein structure and function research or to increase enzyme function is to use our Point Mutation Service combined with our Gene Synthesis Service. Site-directed mutation such as point mutation as well as deletion mutation services is available upon request.

Cloning Service

Bioneer can also perform the time-consuming task of gene cloning, subcloning and sequence verification. Bioneer brings years of experience in molecular biology together with state-of-the-art QC to guarantee the quality of our custom gene cloning service.

Ordering Information

• Gene Synthesis

Price *	Promotion Price $0.39/bp (for genes up to 3 kb)
Minimum Order	$180.00
GeneAdvantage Codon Optimization	Free-of-charge
Cloning Vectors	pUC type
Subcloning **	Subcloning into our standard vector: Free-of-charge Subcloning into a custom vector: $100.00
Delivery Format	2 - 5 µg of lyophilized plasmid DNA
Turnaround Time	- 0.7 kb 10 - 15 business days 0.7 - 1.5 kb 15 - 20 business days 1.5 - 3 kb 20 - 30 business days 3 kb - Inquire

* Price is subject to change. Additional charges will apply for gene segments containing complexities such as high or low GC content, repeat sequences or homopolymeric runs. If any of your sequence is found to contain the above listed complexities, you will be contacted by our Gene Synthesis Specialist.

** An additional charge will apply for subcloning into a commercial vector. The vector purchase cost will be billed separately.

• Mutagenesis

Accepted Materials & Sample Submission Requirements	Plasmid DNA: Minimum 10 µl, concentration of 150 - 200 ng/ul PCR product: Minimum 10 ul, concentration of 50 ng/ul Cultured *E. coli* cells: Lyophilized or stab in agar
Price	$150.00 per point mutation (when ordered with Gene Synthesis Service, insert size up to 1 kb) $200.00 per point mutation (stand-alone order, insert size up to 1 kb) $50.00 additional charge per 500 bp for insert size longer than 1 kb
Subcloning *	Subcloning into our standard vector: Free-of-charge Subcloning into a custom vector: $100.00
Turnaround Time	- 1 kb 10 - 15 business days 1 - 3 kb 15 - 25 business days 3 - 5 kb 25 - 40 business days 5kb - Inquire

* The commercial vector purchase cost will be billed separately.

• Cloning

Accepted Materials & Sample Submission Requirements	Plasmid DNA: Minimum 10 µl, concentration of 150 - 200 ng/µl PCR product: Minimum 10 µl, concentration of 50 ng/µl Cultured cells: Lyophilized or stab in agar
Price *	$100.00 per cloning (when ordered with Gene Synthesis Service, insert size up to 1 kb) $200.00 per cloning (stand-alone order, insert size up to 1 kb) $50.00 additional charge per 500 bp for insert size longer than 1kb
Turnaround Time	1 - 6 kb: 10 business days 6 - 8 kb: 10 - 15 business days 8 - 10 kb: 15 - 30 business days 10 kb -: Inquire

* The commercial vector purchase cost will be billed separately.

Contact Us

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