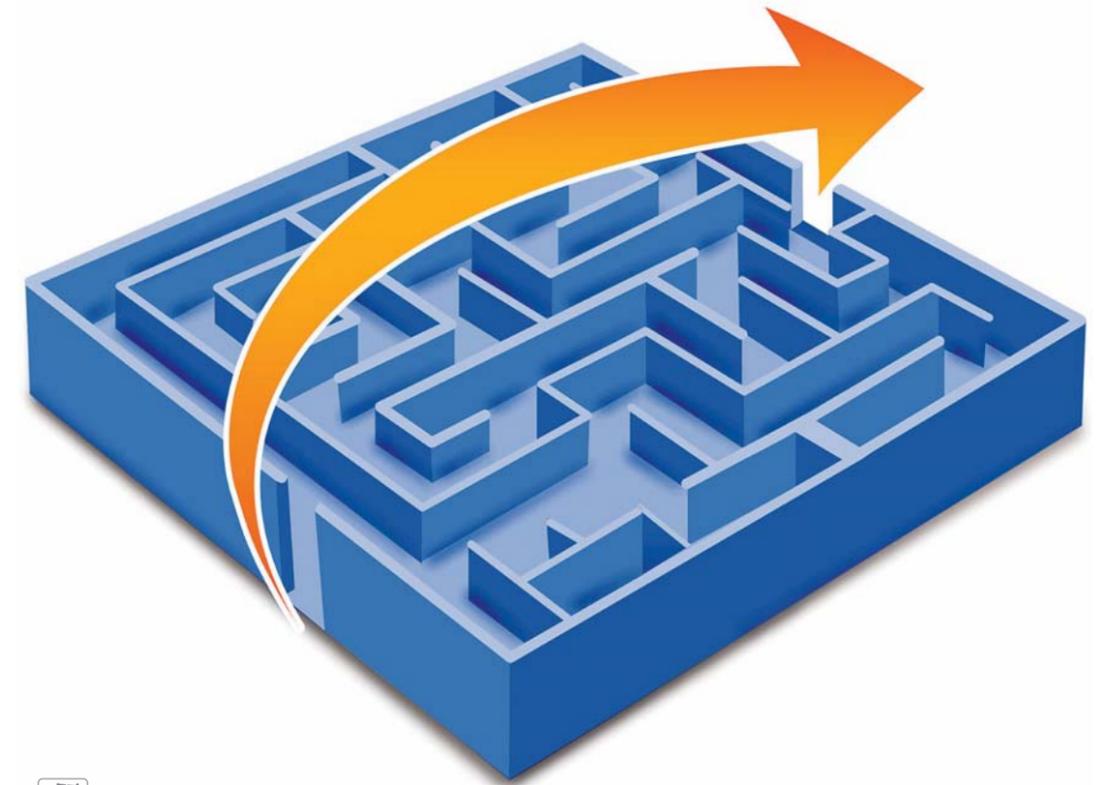


# Custom Bio-Reagent Center

One-Stop Solution to  **Make Research Easy**



-  Gene
-  Peptide
-  Protein
-  Antibody
-  Cell Line

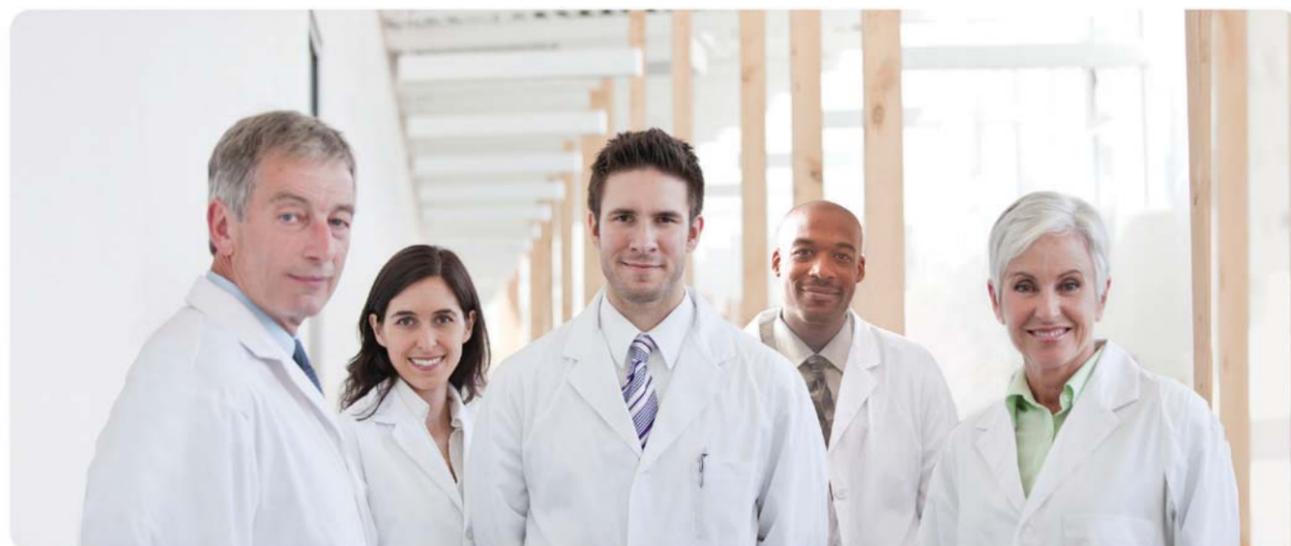
[www.GenScript.com](http://www.GenScript.com)

GenScript USA Inc.  
860 Centennial Ave.  
Piscataway, NJ 08854 USA  
Toll-Free: 1-877-436-7274  
Fax: 1-732-210-0262  
1-732-885-5878





## Custom Bio-Reagent Outsourcing Makes Research Easy



Traditionally, reagents have been categorized as catalog items or mass-produced chemicals. However in the age of rapid research, discovery, and publication, mass-produced reagents can fall short of scientists' expectations and needs. As research projects become more specialized, biomolecules that were once produced in-house in academic, pharmaceutical, and industrial research laboratories are now simply specialized tools used to generate more robust, meaningful results. Today many genes, proteins, peptides, antibodies, and cell lines are now regarded as Custom Bio-Reagents – specialized means to specialized ends.

GenScript understands the value of making custom bio-reagents readily accessible to the research community, and has cultivated this concept by developing an array of high-quality, time-efficient, economical custom bio-reagent services. Outsourcing the generation of your custom bio-reagents to GenScript allows you to perform research more efficiently by diverting your time, money, and resources to innovation, while avoiding the frustrations of endless troubleshooting and tedious tasks. In addition, GenScript makes research easier by offering a full arsenal of solution-based one-stop services for almost any biology research project. Whether your end goal is to obtain purified protein, antibodies, or identify a drug candidate for lead optimization, GenScript can take you from gene or antigen sequence to your final product with our comprehensive research facilities, dedicated scientists, and professional project managers.



### Protein

- BacPower™
- MamPower™

### Gene

- Gene Synthesis
- Custom Cloning
- Mutagenesis
- Plasmid Preparation

### Peptide

- Peptide Synthesis
- Peptide Library
- Peptoid Synthesis

### Antibody

- MonoExpress™
- PolyExpress™

### Cell Line

- Stable Cell Line Development
- CellPower™
- GPCR & Ion Channel Stable Cell Lines

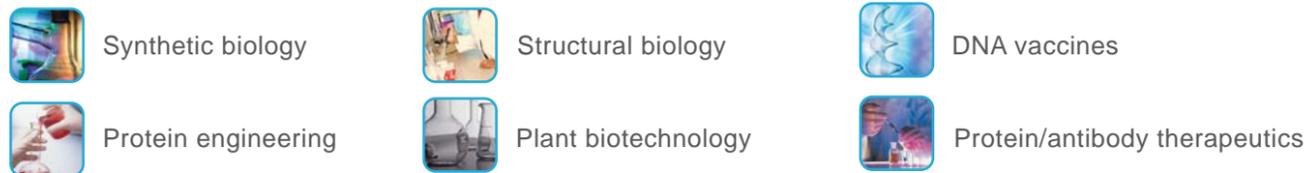
### Advantages of outsourcing your bio-reagent preparation to GenScript include:

- ◆ Faster results for future publications or drug/product development
- ◆ Cost saving by avoiding failures and troubleshooting
- ◆ Conserving spending in laboratory equipment and maintenance costs
- ◆ Ascertaining batch to batch consistency
- ◆ Increased ability to meet impending deadlines
- ◆ 24-hour assistance with your service packages

## Gene Services

Our all-inclusive gene services range from the optimization and synthesis of the most complex genes, to whole genome synthesis capabilities. Our services are designed to deliver the highest quality constructs, while maintaining the speed required to meet the most urgent research deadlines. We are the largest supplier of synthetic genes in the world with 10 years of experience in our core service, gene synthesis. Our gene synthesis service is the starting point for many of our one-stop services, which can take you from gene sequence to purified protein, or to an array of 1,000 protein mutants.

### Applications



### Feature Application: Synthetic Biology

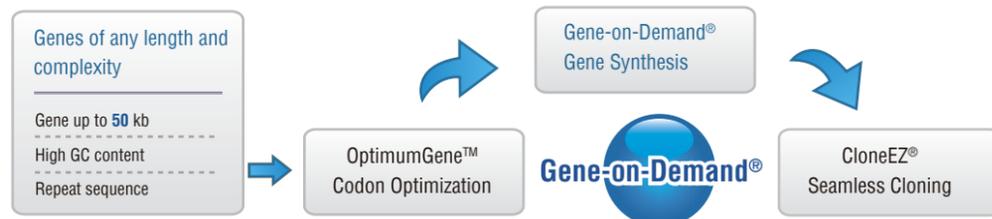


The field of synthetic biology promises to change the way we live via the engineering of novel metabolite pathways to produce biofuels, drugs, and vaccines, while also shedding new light on how basic genetic elements foster life. GenScript's commitment to the advancement of synthetic biology extends beyond merely providing gene synthesis services.

In 2012 GenScript was the only commercial entity to contribute to the Johns Hopkins University Yeast Genome Project (Sc2.0), which will build the first synthetic eukaryotic genome. When completed, this synthetic genome will provide insight into the minimal elements required to sustain life. Our contribution and support of Sc2.0 is just one of the ways that GenScript supports synthetic biology.

### Technology Advantage

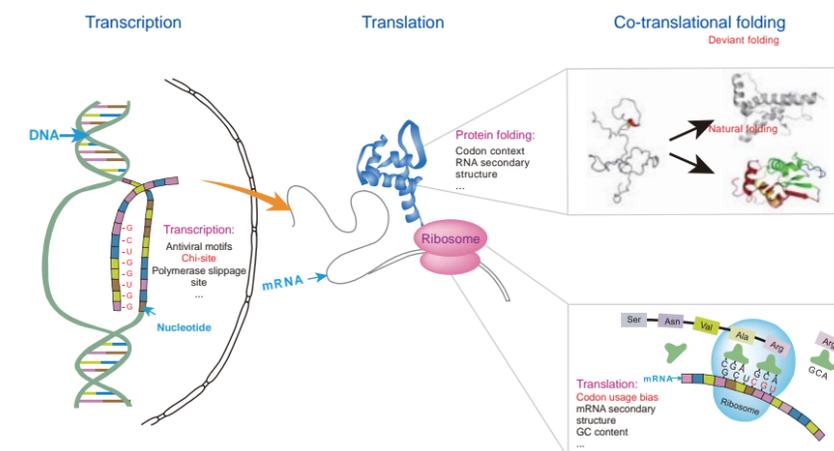
- Gene-on-Demand® Platform is a proprietary assembly-line based platform that facilitates the smooth integration of our gene synthesis technology, cloning technologies, and quality control, resulting in the consistent delivery of high-quality custom constructs.
- CloneEZ® Seamless Cloning Technology is an enzyme-free cloning technology, allowing any gene to be cloned into any vector of choice.
- OptimumGene™ Codon Optimization Technology is a patented algorithm that increases soluble protein expression yields by considering nearly every parameter influencing transcription, translation, and protein folding.



### Feature Technology: OptimumGene™ Codon Optimization

Cloning your gene is just the beginning of your work. The successful expression of your target protein is what matters most. All gene sequences are not created equal, and sequences that result in low protein expression, no protein expression, low protein solubility, or incorrect protein folding cost you time and money due to the endless troubleshooting associated with failed protein expression. That's why, at your request, our PhD level project managers will optimize your gene sequence using our patented OptimumGene™ codon optimization technology, to ensure that your resulting protein exhibits the highest yield (up to a 100-fold increase) and functionality.

#### ▶ OptimumGene™ optimizes nearly every parameter influencing protein expression



#### Selected OptimumGene™ Parameters

##### Transcription:

- GC content
- Cryptic splicing sites
- Negative CpG islands
- TATA boxes
- Termination signal

##### Translation:

- Codon usage bias
- mRNA secondary structure
- Premature polyA sites
- RNA instability
- Ribosomal binding sites

##### Protein Folding:

- Codon and anti-codon interaction
- RNA secondary structures

#### OptimumGene™ Codon Optimization Benefits

- Increases protein yield up to 100-fold
- Facilitates correct protein folding
- Optimizes nearly every parameter influencing transcription, translation, and protein folding
- Applicable to bacterial, yeast, insect, plant and mammalian expression systems
- Has been used to optimize over 50,000 genes
- **FREE** with gene synthesis request

### Service Highlights

#### Gene Synthesis HOT

Our premiere gene synthesis service eliminates the uncertainty and frustration of traditional cloning, which saves you time, labor, and money. From start to finish, our PhD level project managers and research professionals facilitate the synthesis of your custom designed gene regardless of length and complexity, while maintaining unparalleled high-quality and fast turnaround times. Our synthetic genes are 100% sequence verified, and they can be cloned into any vector you choose.

De novo Gene Synthesis Capabilities	
Our Track Record	Our Expertise
<ul style="list-style-type: none"> <li>• 99.9% synthesis success rate</li> <li>• 98% of genes delivered on time</li> <li>• Record gene length &gt;50,000 bp</li> <li>• Over 500,000 genes synthesized</li> <li>• World's largest synthetic gene supplier; 10 years of experience</li> </ul>	Experts in synthesizing genes with: <ul style="list-style-type: none"> <li>• GC content extremes (&gt;70% or &lt;30% GC)</li> <li>• Highly repetitive sequences</li> <li>• Strong secondary sequences</li> <li>• Consecutive single-type nucleotides</li> </ul>



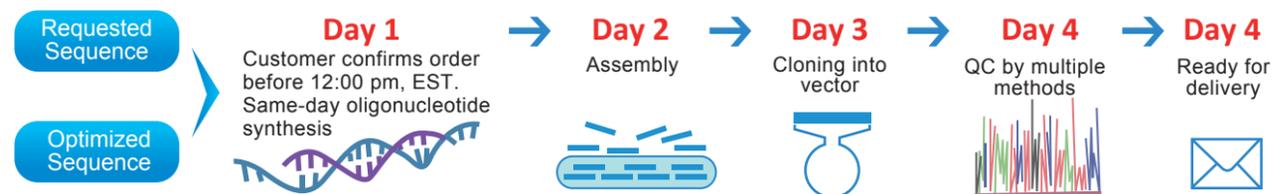
#### One-stop advantage:

Our BacPower™ package makes getting from gene to protein expression easy. Simply submit your gene or protein sequence and receive 3 mg of your purified protein in as few as 4 weeks with a free-if-fail guarantee.

## Express Gene Synthesis Services

Our express gene synthesis services can help you meet all of your time-sensitive research deadlines. Whether you have impending production deadlines, need to submit a grant progress report fast, or just want to stay ahead of the competition, our express services can deliver the gene you want in the time-frame you need without sacrificing the high quality of our premiere gene synthesis service.

### Rush Gene Synthesis Pipeline



### Gene Synthesis Turnaround Times\*

Standard Gene Synthesis Service		Gene Length	Rush Delivery Time(business Days)	Fast Delivery Time(business Days)
Gene Length	Standard Delivery Time (Business Days)	≤ 800 bp	4 days*	7 days*
≤ 1,500 bp	10 – 12 days*	801bp – 1,200 bp	5 days*	
1,501 bp – 3,000 bp	14 – 17 days*	1,201 bp – 2,000 bp	7 days*	11 days*
3001 bp – 4,500 bp	18 – 22 days*			
4,501 bp – 6,000 bp	23 – 27 days*			
6,001 bp – 10,000 bp	28 – 35 days*			

\*Not applicable to genes with complex sequences.

\*Not applicable to genes with complex sequences. For genes >2,000 bp, quote request is required for price and turnaround time.

## Additional Custom Services

GenScript offers several services that cover the full spectrum of molecular biology, and have the potential to decrease your workload and increase your research efficiency. Whether you are struggling to clone a gene, are new to mutagenesis techniques, or refuse to spend your whole day extracting a plasmid, we have a service solution for you. These services are also offered as part of our one-stop packages to make your research as easy as possible.

Custom Cloning
<ul style="list-style-type: none"> <li>Superior flexibility: Clone any gene into any vector starting from your submitted material or our <i>de novo</i> gene synthesis services</li> <li>One-stop advantage: Gene synthesis and subcloning bundle service</li> </ul>
Mutagenesis
<ul style="list-style-type: none"> <li>Unparalleled accuracy: Sequence verified; proprietary polymerase ensures no unwanted mutations.</li> <li>Unlimited sites: No limit on construct mutation number</li> <li>Large construct mutations: Mutations, insertions, and deletions on constructs as large as 12 kb</li> <li>One-stop advantage: Gene synthesis and mutagenesis bundle service</li> </ul>
Plasmid Preparation
<ul style="list-style-type: none"> <li>Choose from 2 Grades: Research grade or Supercoiled (SC) grade</li> <li>Enzyme free (SC grade)</li> <li>Flexible scale range: µg to g scale</li> <li>Low endotoxin content: (≤ 0.005 EU/µg endotoxin, SC grade)</li> <li>Comprehensive quality control: Controlled for appearance, A260/280, supercoiled content, residual RNA, genomic DNA, concentration, restriction analysis, endotoxin level, and bioburden assay</li> </ul>



### One-stop advantage:

Our 1,000 Protein Variants Package makes protein engineering and screening assays easy. Go from gene to 1,000 protein mutants in just 30 days!

## Peptide Services

Our peptide services range from custom peptide synthesis to peptide libraries, to support all of your structural biology, target validation, or lead optimization research needs. Powered by our Flexpeptide™ technology platform, our state-of-the-art facilities, and professional chemists, we are able to achieve a synthesis success rate of over 95% with fast turnaround times for high-quality peptides. Our extensive experience includes the synthesis of both long (up to 200 AA) and complex peptides, as well as the incorporation of a comprehensive list of modifications.

### Applications

-  Antibody generation
-  Drug discovery
-  Structure-activity studies
-  Epitope mapping
-  Target validation
-  Vaccine development

### Technology Advantage

Flexpeptide™ integrates liquid phase peptide synthesis (LPPS), solid phase peptide synthesis (SPPS), microwave technologies, and our proprietary ligation technology which results in the capability to synthesize complex peptides at a high yield.

Argon Shield™ is a packing service that protects custom peptides from oxidation and deliquescence via the application of an argon gas headspace. Argon Shield™ ensures that every peptide we deliver maintains the highest integrity from our production facility to your doorstep.

Total Quality Management (TQM) is a platform that includes MS and HPLC quality control analyses, plus additional quality assurance procedures, which ensures the synthesis and delivery of high-quality peptides.

### Service Highlights

#### Peptide Synthesis

Our Flexpeptide™ platform facilitates the innovative synthesis of high-quality peptides at economical prices. We can synthesize large-scale amounts of simple peptides, peptides at purity levels suitable for antibody production, or long, complex peptides as potential drug candidates. Our services are flexible, delivering peptide purities ranging from crude to >98% pure, and quantities ranging from milligrams to kilograms. Our comprehensive list of available modifications includes acetylation, biotinylation, FITC labeling, PEGylation, internal disulfide formation and many more. In addition, our professional project managers can help you accelerate your research by facilitating your peptide antigen design with our OptimumAntigen™ design tool.



### One-stop advantage:

Our PolyExpress™ Antibody Package takes you from peptide sequence to guaranteed antibodies in as few as 45 days, making antibody generation easy.



## Protein Services

Low expression levels, abnormal protein refolding, difficulty in scaling up, poor post-translational modifications, and long turnaround time are the most common frustrations in protein expression. With our professional and highly experienced team, GenScript provides a comprehensive portfolio of protein expression systems, including bacteria, yeast, insect, and mammalian cells to give our customers the most flexible options.

Our one-stop service packages take projects directly from gene synthesis, to recombinant protein expression, stable cell line generation, antibody production, and assay development with the fastest turnaround time in the market. Our cost-effective platform, detailed planning, and updates and reports allow for superior quality control and give our customers the reassurance of GenScript's high standards of quantity, purity, turnaround time, and quality for every protein project.



## Applications

- Biochemical analysis
- Cell line development
- Structural studies and assay standards
- Drug screening
- Antigen for immunization
- Diagnostic and therapeutic applications
- Drug target discovery and validation
- In vitro* model system validation

### Peptide Service Features

- Synthesis of long and complex peptides: up to 200 AA
- Flexible purity levels: Crude, desalt, >75%, >85%, >98%
- Comprehensive modifications: amidation, phosphorylation, biotinylation, disulphide bond formation, and many more
- TQM: COA, MS, HPLC validation data for each peptide
- Peptide antigen design: Implemented by PhD level project managers
- Flexible quantities: mg to kg

### Peptide Library

Our peptide libraries are ideal for screening a large quantity of peptides to identify optimally bioactive targets in drug screening, target validation, epitope mapping, vaccine development, and structure-activity studies. Our high-throughput technology, stringent quality control, and quality assurance procedures ensure the delivery of peptide libraries suitable for optimized target identification. Additionally, we provide FREE online tools to assist with your library design and a variety of one-stop services to make your journey from peptide to target identification or structural characterization easy.



#### One-stop advantage:

Our Epitope Mapping Service can simplify the identification of antibody drug candidates. You supply the antigen sequence and antibody, we determine the binding site.

### Peptide Library Service Features

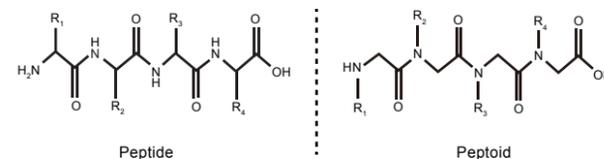
- Flexible purity levels: Crude, desalt; Range from >70% to >98% purity
- 1-4 mg purified peptides (up to 20 mg for crude peptide)
- TQM: COA, MS, HPLC validation data for each peptide
- Comprehensive modifications: Includes labeling, unnatural amino acid incorporation, disulfide bridge formation
- One-stop down-stream services: Epitope mapping, binding assays, and functional assays
- FREE online peptide library design tools
- No cross-contamination: Peptides are supplied in individually labeled vials

### Peptoid Synthesis

Peptide drug discovery can be hindered by peptide instability and design inflexibility. GenScript offers a unique solution to these design constraints through our peptoid synthesis service. Peptoids are a class of peptidomimetics, in which the side chains are appended to the nitrogen atoms of the backbone as opposed to the  $\alpha$ -carbon atoms. This arrangement affords peptoids increased protease resistance, enhanced secondary structure stability, and decreased hydrophobicity, while allowing for a much larger selection of potential side chains when compared to traditional peptides. Our peptoids undergo the same strict quality assurance and quality control procedures as our custom peptides and peptide libraries.

### Peptoid Service Features

- Flexible purity levels: Crude to >98% purity
- TQM: COA, MS, and HPLC validation data for each peptoid.
- Modifications: Acetylation, amidation, biotin, FAM, FITC, TMR labeling
- Quantities up to 500 mg



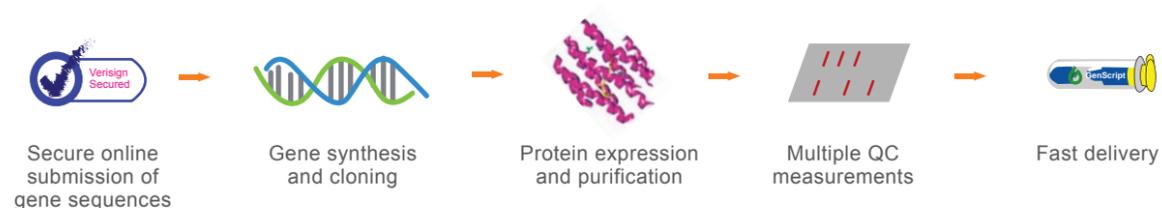
## Technology Advantage

OptimumGene™ Codon Optimization technology is a patented algorithm that increases protein expression yields by considering nearly every parameter influencing transcription, translation, and protein folding.

FoldArt™ Protein Refolding Technology guarantees converting 30-50% of insoluble protein to soluble protein and delivering refolded protein with purity of 85% or greater for those hard to dissolve proteins.

## Service Highlights

### Protein Expression and Purification Streamlined Services



### BacPower™ Guaranteed Package

BacPower™ guarantees delivery of 3 mg of purified soluble custom protein in as soon as 4 weeks starting from only \$2,200. This package offers free DNA constructs and flexible scale-up options ranging from 1 L to 2,000 L to meet our customers' varied research requirements.

BacPower™ Guaranteed Package	
<b>Customer Provides</b> <ul style="list-style-type: none"> <li>Target protein sequence</li> </ul>	<b>Deliverables</b> <ul style="list-style-type: none"> <li>3 mg protein with 75% or 85% purity</li> <li>Flexible option for tagged or tag-free protein</li> <li>QC data (SDS-PAGE, western blot and others are available)</li> </ul>

### MamPower™ Guaranteed Package

Our MamPower™ Guaranteed Protein Package guarantees delivery of 3 mg or more of purified protein product starting at \$8,900.

MamPower™ Guaranteed Package	
<b>Customer Provides</b> <ul style="list-style-type: none"> <li>1-5 µg construct or</li> <li>Target protein sequence</li> </ul>	<b>Deliverables</b> <ul style="list-style-type: none"> <li>3 mg or more of purified protein</li> <li>Sequence report, construct(s) report, expression evaluation report, SDS-PAGE, and QC documents</li> </ul>

## Additional Custom Services

### Protein Expression

- OptimumGene™ codon optimization: up to 100-fold increases in protein expression level in the *E. coli* system
- Comprehensive expression systems (bacterial, yeast, baculovirus/insect cell, or mammalian cell expression systems)

### Protein Characterization

- Protein characterization by biochemical, biophysical, and functional evaluations
- Protein structural biology by crystallization and x-ray crystallography

### Protein Purification

- Flexible purification methods: affinity, ion-exchange, hydrophobic interaction chromatography, or size exclusion
- Double tag strategy for large-protein isolation

### Protein Refolding

- FoldArt™ protein refolding technology
- Refold success rate of 95% of insoluble protein from inclusion bodies

### Large-scale/OEM Production

- Bacterial fermentation up to 2,000 L scale
- Yeast fermentation up to 2,000 L scale
- Baculovirus/insect cell production up to grams
- Mammalian cell production up to grams

### Endotoxin Detection and Removal

- Endotoxin detection sensitivity as high as 0.005 EU/ml
- Endotoxin removal to less than 0.1 EU/ml

### Bioprocess Services

- Transient gene expression and protein production
- Stable cell line development and protein production
- Process development and transfer

## Antibody Services

Antibody production can be tedious and fraught with complications, wasting precious time and resources better spent elsewhere. By outsourcing your antibody production or modification project to GenScript, you make the choice to simplify your research and guarantee delivery of your customized antibody faster than any other vendors at highly cost-effective prices. We provide one-stop solutions to match your antibody needs with the best guarantees in the market. All antibodies are generated by our AAALAC internationally accredited and OLAW assured animal facilities.

### Applications



Signal transduction studies



Intracellular staining



Identification and separation of cell populations



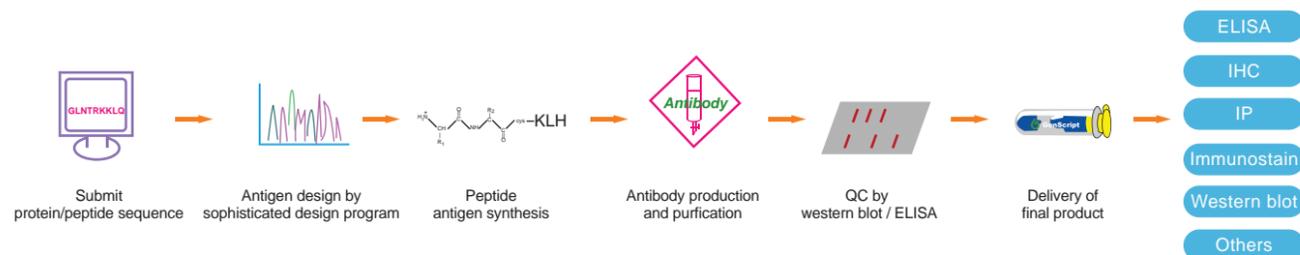
Protein quantitation



Immunohistochemistry



Cell surface antigen characterization



### Technology Advantage

OptimumAntigen™ design software creates peptides for antibody production by measuring each peptide antigen against several protein databases to confirm the desired antibody and epitope specifically.

T-Max™ Adjuvant is a novel immunization adjuvant which elicits stronger and faster cellular immune response and longer immune stability making production of high-titer, high-affinity antibodies possible.

GANP® Transgenic Mice are especially licensed mice from Transgenic Inc. which allows for the production of high-affinity and high-specificity antibodies through overexpression of germinal center associated nuclear protein (GANP) in B-cells.

### Service Highlights

GenScript custom antibody services include recombinant antigen protein expression, peptide design and synthesis, polyclonal and monoclonal antibody production, express antibody production, affinity purification, conjugation, fragmentation, and immunoassay development.

#### PolyExpress™

PolyExpress™ Antibody Service offers an unprecedented guarantee to our customers ensuring delivery of 1-5 mg of purified polyclonal antibody with a final ELISA titer of 1:32,000 or higher. With more pAb guaranteed, you can stretch your research dollars further, increasing your opportunity of success by 2-3 times over other commercial pAb. Delivery comes at record-breaking speed in only **45 days**, faster than any of our competitors and at the lowest price, only **\$499** for the first 499 orders per month. All this comes with a free-if-fail guarantee that eliminates the risk to you and a package that can't be mimicked by others.

PolyExpress™ Rabbit Polyclonal Antibody Guaranteed Package	
Customer Provides	Deliverables
<ul style="list-style-type: none"> <li>Antigen sequence: peptide-antigen or protein-antigen</li> </ul>	<ul style="list-style-type: none"> <li>0.5 ml of pre-immune serum</li> <li>1-5 mg affinity-purified antibodies</li> <li>Antibody COA report including antigen info, antibody QC data</li> <li>2 mg free peptide, MS and HPLC reports</li> <li>Guaranteed final ELISA titer of 1:32,000</li> </ul>

#### MonoExpress™

Our MonoExpress™ Western Guaranteed Antibody Service package develops antibodies 4 months faster than traditional immunization protocols in **45 days** starting from just **\$3,800**. This package guarantees at least one clone with positive western blot results for immunogen. This is achieved through the smooth integration of our proprietary technologies in the field of gene synthesis, protein expression and antibody generation. This offer cannot be matched by any other vendors and is available exclusively from GenScript.

MonoExpress™ Western Guaranteed Antibody Services (Mouse or Rat)	
Customer Provides	Deliverables
<ul style="list-style-type: none"> <li>1-2 mg purified protein of &gt;75% purity at &gt;0.4 mg/ml or</li> <li>Name, species, sequence, and NCBI accession number of target protein, and full length cDNA plasmid (&gt;500 ng)</li> </ul>	<ul style="list-style-type: none"> <li>Up to 5 hybridoma cell lines (we guarantee at least one with IgG isotype), 2 vials for each cell line</li> <li>2 mg purified antibody for customer-selected positive clone</li> <li>Full project report</li> </ul>



## Additional Custom Services

Monoclonal Antibody Services
<ul style="list-style-type: none"> <li>• One-stop peptide to antibody mAb packages</li> <li>• Phospho-specific mAb packages</li> <li>• Anti-idiotypic mAb packages</li> </ul>
Polyclonal Antibody Services
<ul style="list-style-type: none"> <li>• Comprehensive species: rabbit, mouse, rat, chicken, and goat</li> <li>• Phospho-specific pAb package</li> </ul>
Monoclonal Antibody Production Services
<ul style="list-style-type: none"> <li>• Guaranteed delivery</li> <li>• Flexible scale from mg to g quantities</li> <li>• Unlimited production: for any cell line in any chosen species</li> </ul>
Large-scale Antibody Production Services
<ul style="list-style-type: none"> <li>• Monoclonal antibody production up to grams</li> </ul>

## Cell Line Services

Creation of stable cell lines for recombinant protein and mAb production, GPCR and ion channels, or assay development, is a massively time consuming endeavor often requiring tireless troubleshooting to maintain consistency and achieve high productivity. Time and cost pressures make these already frustrating projects even more stressful, but GenScript can eliminate the uncertainty and deliver a high-quality stable cell line, with maximal productivity, based on your specifications, at the best price.

### Applications



Cell-based assay



Protein production



R&D reagents



Animal models

### Technology Advantage

- Multiple parental cells are available including 293, CHO, BHK, NS0, 1321N1, RH7777, and U-2OS.
- CellPower™ guaranteed lentiviral platform uses lentiviral-based gene transfer to achieve high cloning capacity (up to 8 kb) and guarantees success with any gene in any host cell line.

### Service Highlights

#### Stable Cell Line Development Services

Our stable cell line development service offers specifically customized cell lines for research or production applications. With our research-grade cell lines, you can perform cell-based assays and other functional studies by targeting GPCR, ion channels, or specific enzymes. Production-grade cell lines offer high yields of recombinant proteins such as mAbs, Fc fusion proteins, growth factors, membrane receptor ECDs, and other soluble proteins. All our cell line services include gene synthesis and subcloning (optional), transient expression evaluation, and stable cell line development using mammalian cells. We will evaluate the top 10 clones for 10 passages to ensure stability and offer flexibility in host cells including 293, CHO, BHK, NS0, or your own provided line.



#### One-stop advantage:

Our **Stable Cell Line Development Services** bring you directly from gene or protein sequence to stable cell line and protein expression.

Stable Cell Line Development Services (Research , Production, or Industrial-grade)		
Customer Provides	Deliverables	Timeline
<ul style="list-style-type: none"> <li>• Protein or gene sequence</li> <li>• Desired host cell line (optional)</li> </ul>	<ul style="list-style-type: none"> <li>• Top 3 stable clones</li> <li>• Sequence report</li> <li>• Construct(s) report</li> <li>• QC data (ELISA, western blot, flow cytometry, RT-PCR etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• 14-18 weeks (research-grade)</li> <li>• 27-32 weeks (production-grade)</li> <li>• 27-32 weeks (industrial-grade)</li> </ul>

## CellPower™ Stable Cell Line Development Service

Have you encountered road bumps developing stable cell lines such as low transfection efficiency, tedious clone picking, inability to transfer your gene of interest into certain cell lines, or gene size limitations. CellPower™ delivers your custom stable cell line as either a stable pool (\$2,490) or as a cell line derived from single clones (\$4,990) with a risk-free guarantee. With our 100% success rate and having developed over 200 cell lines over the past 4 years, we are confident to guarantee delivery of any set of genes in any host cell line, validated by rigorous screening methods, or there is no charge to you.

CellPower™		
Customer Provides	Deliverables	Timeline
<ul style="list-style-type: none"> <li>Gene sequence</li> <li>Mycoplasma-free certified host cells (if not using a GenScript host cell line)</li> <li>Primary antibody</li> </ul>	<ul style="list-style-type: none"> <li>2 vials of cells, 3X10<sup>6</sup> cells each vial</li> <li>QC data</li> </ul>	<ul style="list-style-type: none"> <li>8-10 weeks for stable pool</li> <li>12-14 weeks for single cell-derived clones</li> </ul>

## GPCR & Ion Channel Cell Line Collection

With over 160 GPCR and ion channel stable cell lines available for compound screening and profiling services, we can accelerate your research or drug discovery. Our stable cell lines are rigorously quality tested and come with a 16-passage stability test and high membrane protein expression. The compounds are ready to screen and come with wide choices of drug targets. Customized reagent preparation services are available upon your specifications as Ready-to-Use™ Frozen Cells, Membrane Preparations, and Custom Cell Lines made from these stable cell lines.

**Related Assay Services:** GPCR assay service, GPCR binding assay service, ion channel assay service, kinase assay service, protease assay service

## Additional Custom Services

Therapeutic Antibody Development
We offer a comprehensive antibody drug development platform smoothly integrating antibody engineering and production technologies. One-stop service packages include hybridoma development, antibody production, sequencing, antibody affinity maturation, epitope mapping, antibody/protein characterization, <i>in vitro</i> assay, screenings, efficacy and safety studies, transient expression, and antibody stable cell line, and antibody production.
Animal Models for Cancer Drug Evaluation
GenScript's animal model services include oncology and inflammatory disease models, mainly focusing on efficacy evaluation of antibody and small molecular drugs. We have worked with more than 30 tumor types, 250 tumor cell lines, and 36 inflammatory disease models.
Cell Line Engineering
We offer customized stable cell line services including gene optimization, cell culture, and cell-based assay development, delivery of high-quality stable cell lines with maximal productivity and the best price to meet customer specifications.

- ◆ **No. 1** in Gene Synthesis
- ◆ **Leading** Biology CRO Company
- ◆ **86** Country Presence
- ◆ **10** Years Experience
- ◆ **1,300** Employees
- ◆ **800,000** ft<sup>2</sup> Facilities
- ◆ **Leader** in Synthetic Biology



Branch Office  
Amsterdam, Netherlands



Branch Office  
Tokyo, Japan



Headquarters  
Piscataway, NJ, USA

R&D Facility  
Nanjing, China



The GenScript logo resembles a drop of water and symbolizes the source of life. It inspires our dedication to evolve with our customers and push the limits of technology to save more lives by providing early drug discovery and development services. Founded in 2002, GenScript has grown together with the synthetic biology industry and is now the world's largest gene synthesis supplier. Headquartered in New Jersey with subsidiaries in Europe, Japan, and China, GenScript consistently provides the best research services to the scientific community worldwide. Built on our assembly-line mode, one-stop solutions, continuous improvement, and stringent IP protection, GenScript provides a comprehensive portfolio of services. Besides our world-renowned gene synthesis service, GenScript offers comprehensive services for biological research and early-phase drug discovery, such as bio-reagents, agricultural research, food industry research, assay development & screening, antibody drug development and research, and animal model services. With an impressive track record of success, GenScript is your ideal, reliable innovation partner in advancing and transforming biology research to make your reserach easy.