

PORTFOLIO



Peace has one
language!

Biotech desk[®]

A company which knows what it sells.



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- 📞 9550029559, 800 GENOMES & 800 GENETIC

Custom Gene Synthesis:

We in collaboration with Genscript, one of the largest Gene synthesis suppliers in the USA offer this service. We also add value to this service by closely examining your gene, scrutinizing the expression frame, adding suitable tags and restriction sites for cloning.

Highlights:

- Long or complex GC-rich or repetitive sequences with 100% accuracy
- Codon optimization through OptimumGene™ - Codon Optimization for various expression systems
- CloneEZ® seamless cloning technology can accurately fuse your gene into any site on any vector
- High Throughput parallel service and Express service available
- Choice of more than 150 cloning and expression vectors

Deliverables:

- 4 ug lyophilized DNA
- Sequence chromatogram
- Plasmid Construct map

What you can do with our Gene Synthesis:

GenParts™ DNA Fragments:

GenParts™ are linearized, double-stranded DNA fragments or DNA blocks, which can be used directly or cloned/assembled into any vector of choice. GenParts DNA fragments are checked for the right sequence size using gel electrophoresis and fragment analyzer; they are not subjected to NGS or Sanger sequencing.

Combinatorial Libraries:

Combinatorial DNA libraries, or combinatorial assembly libraries, are made as a set of predefined DNA parts strategically assembled in a specific arrangement. They are used for applications such as Synthetic Biology, Strain Engineering, Gene expression regulation etc.

Site Directed Mutagenesis Libraries:

In these libraries, any given residue can be substituted with any of other 19 common amino acids, creating systematic combinations of amino acid mutations that reveal any significant pattern.

Scanning Point Mutation Libraries

It outperforms standard alanine/cysteine scanning by replacing each amino acid with all 20 amino acids simultaneously. This technique provides a detailed profile of each amino acid at the position. For each codon of interest, a small, site-saturated library is constructed.

This library can be delivered as a pool or in a separated format for any substitution variant (19 in total).

Randomized and Degenerated Libraries

GenScript's *in vitro* library synthesis technology can introduce random substitutions on a controlled level with maximum flexibility. The mutation frequency can be set to any value between 1 and 20 mutations per kb. A peer group of 48, 96, or 192 individual transformants is sequence-verified.

Site-Saturation Mutagenesis Libraries

Mutate several positions one at a time within a sequence located either consecutively or scattered throughout the protein sequence.

- Each position can be mutated to all 20 amino acids or specified codons
- Variants are delivered as small pools, each pool containing variants of a single amino acid position

Saturation Scanning Mutagenesis Libraries

Target a consecutive string of amino acids within a defined region of the sequence or the whole protein sequence.

- Each position can be mutated to all 20 amino acids or specified codons
- Variants from all positions delivered as a single pool

Site Directed Mutagenesis:

Why spend time and money on mutagenesis kits and optimizing PCRs and sequencing when you can get it done from us. Just provide the complete sequence of the template including the target gene, its vector & mutation specifications! We provide a fast, fail-safe approach to obtain mutant constructs, with 100% accuracy.

*Up to 5 mutations in a 30 bp stretch is considered as a single service. You can order the mutation as a de novo gene synthesis service or give your construct to mutate.

Highlights:

- 4 µg lyophilized destination vector containing the gene
- Chromatogram confirming sequence of mutant and wild type
- Certificate of Analysis with plasmid map

OligoPools

GenScript's proprietary semiconductor-based electrochemical oligo synthesis platform developed by CustomArray, Inc. allows the precise design and synthesis of thousands of user-defined sequences simultaneously on a coverslip-sized chip, providing you with an affordable, customized oligo pool.

DNA/RNA Oligos:

- All scales available from 10nmol to 1μmol
- Different purifications available such as desalted, HPLC, PAGE
- All modifications available such as fluorescent labels, modified bases, phosphorylation, thiolation, linkages
- Minimum 2OD guaranteed
- 72 hour delivery

Peptide Synthesis:

Highlights:

- Crude to >98% purity
- Free peptide solubility test
- Stringent Quality Management and special Argon Shield Packaging to ensure reproducibility
- TFA removal, Endotoxin, Moisture content analysis can be done at additional cost
- KLH or BSA conjugation available
- 300+ Modifications of different kinds available

Deliverables:

- HPLC and MS Reports for each Peptide
- Flexible Aliquoting Options
- Certificate of Analysis

Peptide Array:

Peptide arrays have been developed, to help ease the screening procedure in drug development research. Peptide arrays are most widely used in:

- Antibody epitope mapping
- Protein-protein, enzyme-substrate, and receptor-ligand interactions studies
- Phosphorylation studies

Highlights:

- 5-250 nmol of each peptide can be synthesized
- Range of peptide can vary from 5 to 15 AA
- Complex modifications like FITC, Phosphorylation can be done
- Minimum of 48 Peptides are to be ordered and all the peptides should have the same length

Epitope Mapping:

This is the process of identifying the antibody binding site on a target antigen. Based on an advanced overlapping peptide library platform, we provide a comprehensive series of **Epitope Mapping Services**

Highlights:

- Proprietary FlexPeptide™ technology used to synthesize peptide library
- Minimized non-specific interactions by optimized detection methods

Custom Antibody Services:

Genscript is the winner of the CiteAb's most popular custom antibody supplier for 2018.

- Application-Guaranteed antibodies
- OptimumAntigen™ design tool, proprietary adjuvant, and intelligent Antigen Strategy increase antibody specificity and affinity.
- AAALAC International accreditation and OLAW certification for the Animal facility

Polyclonal antibody packages

Feature	Details	Basic (SC1180)	Silver (SC1648)	Gold (SC1649)	Premium (SC1676)	Premium Plus (SC1809)
Immunization	Antigen(s) Synthesized	1 Peptides	2 Peptides	3 Peptides	1 Protein	
	Rabbits Immunized	2	4 (2 per peptide)	6 (2 per peptide)	2	
Deliverables	Pre-immune Serum	0.5 ml				
	Antigen Sample	2 mg of Each Peptide Antigen			200 µg Protein	1 mg protein
	Antigen Affinity Purified pAb(s)	1 (2-6 mg total)	2 (4-12 mg total)	3 (6-18 mg total)	2 (2-10 mg total)	1 (2 mg)
Guarantee	Application	ELISA Titer 1:64,000			WB (Premium) or WB & IP (Premium Plus) Positive for target protein antigen binding ELISA titer 1:128,000	
	Antibody Yields	1 purified pAb (≥2 mg)	2 purified pAbs (≥2 mg)	3 purified pAbs (≥2 mg)	2 purified pAbs (1-6 mg each)	1 purified pAb (≥2 mg)
	Timeline	~ 45 Days*			~ 10-11 Weeks*	

Monoclonal antibody packages

Protein Antigen Packages	Guarantees	Starting Material	Immunization	Customer Screening	Deliverables	First Delivery
MonoExpress™ Premium SC1711	Application-positive for one clone* ELISA ≥ 1:64,000	Protein antigen produced by GenScript You provide: name, sequence (NCBI accession number if available) of target protein	5 Balb/c mice or 3 rats	10 ELISA(+) supernatants for evaluation in client's own experimental system*	Up to 5 hybridoma cell lines of customer's choice+ 2 mg purified mAb from one chosen hybridoma 200 µg immunogen protein	11 weeks*
MonoExpress™ Basic SC1717	WB positive for immunogen ELISA ≥ 1:64,000	We use your provided protein antigen as the immunogen	5 Balb/c mice or 3 rats	5 ELISA(+) supernatants for evaluation in client's own experimental system*	Up to 5 hybridoma cell lines of customer's choice+ 2 mg purified mAb from one chosen hybridoma	6-7 weeks*

* Production time, delivery time differs

Enquire for Customized Monoclonal antibody development giving you the choice to screen hybridomas of your choice.

Epitope Binning: This is an add-on service to Monoclonal antibody development. Epitope Binning is a means of antibody validation in which monoclonal antibodies are tested against one another to determine which antibodies compete for the same antigenic epitope.

Recombinant Protein Expression:

Bacterial Expression: BacPower™ Guaranteed Bacterial Recombinant Protein Expression Service

The BacPower™ Guaranteed Bacterial Recombinant Protein Expression Service starts with a proprietary codon optimization service, followed by gene synthesis and sub cloning, all the

way through protein expression and purification using our bacterial protein expression system. If your target recombinant protein becomes insoluble in the inclusion body fraction, FoldArt™, a proprietary protein refolding technology will be applied to solubilize the protein at no extra cost. Endotoxin removal and scale up available at extra charge.

Deliverables:

- 3 mg of protein with 85% or 90% purity. Extra amount of protein is delivered at additional cost
- Gene in expression vector delivered
- Protein expression evaluation report
- Additional QC report of protein quantitation, Western Blot and purity analysis

Insect cell expression: InsectPower™ Baculovirus Expression System

The Insect expression system is suitable for researchers working on eukaryotic proteins with post translational modification, improved solubility and suited for secretory proteins. GenScript can provide you with free, advanced codon optimization specific to Sf9, Sf21, Hi-5, and S2 insect cell lines, to further enhance the expression of your protein.

Deliverables:

- Plasmid Construct report
- 5 ml virus stock
- Expression data including WB analysis
- ~1 mg of approx >75% pure protein
- QC report

Recombinant Antibody (rAb) Services: MamPilot™ guaranteed recombinant antibody production service

This guaranteed package offers full length IgG expression in either CHO or HEK293 cells. This applies to antibodies with **common constant region (CH/CL)*** from Human IgG1, Human IgG4, human IgG4 (S228P) mouse and rabbit IgG2a, and Rabbit. If your antibodies don't fit the guaranteed package (different isotype or mutation on constant region), try our customized MamPilot package (SC1806) to have purified antibodies within 5-6 weeks.

Deliverables:

- LC and HC in pUC57 vector
- Optimized gene sequence report
- Purified antibody at 0.5 mL/vial (conc.: >0.3 mg/ml)
- QC data

BAC Library:

Amplicon Express' team of dedicated scientists have made over 2,650 custom BAC libraries and processed more than 57 million high-quality, large insert genomic DNA clones since 1996.

Why BAC clones are essential:

- BAC clones are from one specific allele (100 Kb to 200 Kb).
- Sequencing BAC clones can simplify a complex genome to "BAC size" regions of interest!
- BAC's allow you to determine haplotype and phase of each chromosome/allele.

Metagenomic Fosmid Library:

A fosmid library is prepared by extracting the genomic DNA from the target organism and cloning it into the fosmid vector. This service comes to you from Amplicon Express , the world leader in generating quality libraries having made hundreds of Fosmid libraries from various organisms including metagenomic soil and deep seawater samples.

Illumina NGS libraries: Amplicon Express offers to generate NGS grade DNA and/or ready to run illumina NGS libraries from individual Fosmid/BAC clones, pools of Fosmid/BAC clones or unpicked pools of titrated transfected clones.

Other services provided:

- Whole Genome Profiling
- Sanger DNA sequencing
- NGS grade DNA isolation services
- High Molecular weight DNA isolation
- BAC library screening and
- BAC clone sequencing.

In-house services

Cloning and Sub-cloning:

Service includes:

- PCR optimization and amplification of gene of interest
- Restriction digestion and sub-cloning into vector of choice
- Culture growth and plasmid preparation

Deliverables:

- 100 ug of plasmid construct
- Sequencing chromatograms
- Detailed report with gel pictures

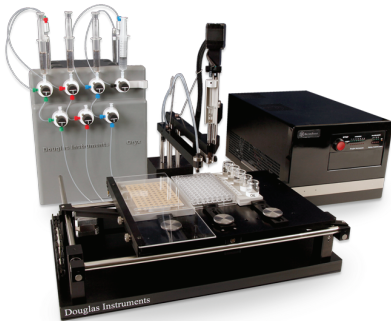
Protein Expression and Purification:

Recombinant protein can be expressed in bacterial host. An evaluation can be done to check for expression on induction. Different conditions can be checked for expression optimization including different expression vectors, temperatures, host strains and more. We can also check whether the protein partitions into the soluble or insoluble fraction and can optimize solubilization of the insoluble proteins. Some proteins can be checked for activity by simple colourimetric assays. Scale up can be performed to purify more protein.

Deliverables:

- Evaluation report along with gel pictures
- Crude to >90% pure protein (concentration and yields may vary)
- Activity check report

Protein Crystallography:



We offer crystallography services, at our in house facility using the Oryx 4 robot for protein drop dispensing. We perform sitting drop, hanging drop and Microbatch-under-oil crystallization set ups. Different buffer conditions are screened. We use novel techniques for increasing the number of hits like microseeding , bottle neck crystallization etc. If you have a protein you want to crystallize, please come to us. We will do the screening and

optimization for you. Crystals obtained can be sent back to you or diffracted for analysis.

Cloning and Sub-cloning:

Sanger Sequencing of PCR products or gene constructs can be done using the ABI platform. A read length of 550-600 bp is guaranteed depending upon the quality of the DNA supplied.

Our Principals



Services:

- **Gene Synthesis & Cloning:** As a pioneer and leader in gene synthesis technology with over 600,000 completed gene synthesis projects for scientists around the world.
- **Peptide Synthesis & Peptide Array:** Custom Peptide Synthesis to high-throughput Peptide Library and Peptide Array services. Various peptide modifications and TFA Removal services also available.
- **Recombinant Protein & rAb Services:** Different expression platforms can be used depending upon suitability, along with optimization of expression, protein characterization and protein refolding services.
- **Custom Antibody Production:** Quality custom Polyclonal & Monoclonal antibody production services provided. Custom antibody service portfolio includes: epitope selection, synthesis of peptide/protein antigen, conjugation, counter screening, affinity purification, fragmentation, sequencing, scale-up, immunoassay development, and antibody drug development.
- **CRISPR Services:** Synthetic sgRNA service for efficient, DNA-free gene editing

Products:

- **Mol. Bio:** PCR range, GenBuilder Cloning Kit, Plasmid prep & Gel extraction kits, ladders and markers
- **Protein Analysis:** Affinity purification resins & Mag beads, Protein markers, Precast PAGE Gels, Chemiluminescent HRP Substrate Kit & other Western Blot detection Kit.
- **Recombinant Protein:** Cytokines, Growth Factors, Immune Checkpoints, Tag Cleavage Enzymes.
- **Antibodies:** Primary Antibodies, Secondary & Tag Antibodies.
- **CRISPR:** Cas9 Nuclease, Cas9 Kits & antibodies, CRISPR/Cas9 Constructs, Libraries
- **Cell lines**
- **ORF clones**
- **Endotoxin detection & Removal System**

Devices:

- **eBlot L1 Protein Transfer System:** 9-17 minutes western blotting transfer system with ultra-efficiency and simplicity.
- **eStrain L1 Protein Staining System:** 10-min Protein Gel Staining with ultrasensitivity.



OriGene Technologies uses high-throughput, genome wide approach to develop products for pharmaceutical, biotechnology, and academic research.

Their flagship product is the cDNA clone collection, a searchable gene bank of over 30,000 human full-length TrueClone cDNA collection and over 25,000 TrueORF cDNA clones. It has also developed full length proteins and antibodies recognizing native proteins.

- **cDNA clones:** Expression plasmids for more than 1 million clones from Human/Mouse/Rat
- **LentiORF:** A lentiviral delivery system for efficient transfection Disease Mutant and Variant Clones
- **shRNA:** For Human, Mouse and Rat genes, available in lentiviral options also.
- **siRNA:** For human, mouse and rat for guaranteed knockdown, contains 3 gene specific siRNA along with scrambled negative control.
- **MicroRNA:** expression plasmids with genome wide coverage from miRBase 20.0, 3' UTR clones for miRNA target validation
- **CRISPR:** CRISPR knockout kits containing 2 guideRNA vectors, donor cassette containing flanking homology arms, CRISPR/Cas9 vectors, (gRNA) Target sequence cloning into CRISPR/Cas9 vectors, Donor vector construction with predesigned cassette, Synthetic sgRNA, Cas9 nuclease, Transgene Knockin at AAVS1 and ROSA26 Loci
- **qPCR Tools:** qPCR primer pair- predesigned and validated for human/mouse/rat, qPCR template standards, 1st strand cDNA from normal tissues of human/mouse, qPCR master mix
- **Recombinant proteins:** Over 10,000 full-length human proteins produced in human cells
- **Antibodies:** TrueMAB™ are mouse monoclonal antibodies generated using full length human proteins as immunogens. Extensive validation by WB, IHC and IF Secondary, anti-Tag, and loading control



Bioss offers more than 11,000 primary antibodies and 130,000 derived products;

- Polyclonal and Monoclonal antibodies
- Fluorochrome conjugated antibodies
- Phospho specific, methyl specific and acetyl specific antibodies



In 2019 CiteAb Awards, Elabscience highly commended for Elisa Kit Supplier. Elabscience offers;

- Elisa Kit & Biochemical Assay Kit
- Wide range of polyclonal and monoclonal antibodies,
- Flow Cytometry antibodies
- CLIA kits
- TR authenticated cell lines
- Phospho specific, methyl specific and acetyl specific antibodies



Rockland adheres to QSR / cGMP quality standards (CFR:21H part 820) with full reporting and traceability. They produce their own antiserum and test each antibody ensuring quality of each and every product.

- TrueBlot® for Generating Publication-Quality IP-Western Blotting
- Primary and Secondary antibodies
- Tag antibodies
- Avidin, Streptavidin and Biotin



GL Biochem (Shanghai) Ltd.
www.glbiochem.com

GL Biochem is an internationally recognized biochemical manufacturing company that specializes in the production of peptide reagents, custom peptides. GL Biochem offers;

- Peptide: custom peptides, catalogue peptides, pharmaceutical peptides, cosmetic peptides
- Amino acids and derivatives: unnatural amino acids, N-methyl amino acids, Boc-amino acids and derivatives, Fmoc-amino acids and derivatives, etc.



www.biobasic.com

Bio Basic is a Leading Supplier & Manufacturer of Life Science Products and Services:

- Kits for Genomic DNA isolation
- Kits for RNA isolation
- Kits for mRNA and microRNA extraction
- Blunting and Ligation
- Cloning and Transformation
- PCR kits and premixes
- Protein extraction kits
- Protein purification kits
- DNA/RNA ladders
- Reverse transcription
- Protein extraction kits
- Protein purification kits
- Protein Assay and stain kits



www.cellscript.com

Cellsript provide the best products and technologies for making RNA for translation in cells for clinical research and therapeutics.

- In vitro transcription kits
- Post translational Capping and Tailing kits
- Modified nucleotide incorporation in mRNA



www.genebridges.com

Gene Bridges is a spinoff of EMBL, Germany commercializing its famous cre-lox system. Th technology is suitable for genetic and strain manipulations.

- RedE/T Recombineering kits
- 4 Way recombineering along with Cas9



www.powersscientific.com

Vibration free incubator for crystal growth- The uniform temperature and low vibration environment these incubators provide allows for optimum crystal growth.

Jena Bioscience was formed by scientists of the Max Planck Institute, Dortmund, Germany. It specializes in nucleotide chemistry and has synthesized a vast range of functional and structural compounds.

- **Nucleotides and Nucleosides:** More than 2000 natural and modified nucleotides in stock for various applications such as structural studies, labelling, signal transduction, drug discovery and more
- **Mol. Bio Products:** PCR, Real Time-PCR, Cloning and Mutagenesis, DNA & RNA Preparation Kits, Modifying enzymes, In vitro transcription products etc.
- **Probes:** DNA, RNA, Protein & Cell Labeling kits and Reactive components.
- **LEXSY:** A unique eukaryotic expression system in Leishmania with glycosylation patterns same as human
- Nourseothricin antibiotic for LEXSY and other applications.
- **Crystallography & Cryo-EM:** Protein Crystallization Screens, Optimization Screens, Phasing, Cryo EM-V Kit, Quantifoil, UltrAuFoil® and C-flat™ Holey Carbon Films, Amphipol A8-35 etc

Rigaku, a world leader in crystallography, has all reagents and tools required for protein and small molecule crystallography:

- WIZARD Screens and buffers for crystallization
- Tools for crystallography
- Tools for Cryo EM

- Loops and mounts
- Goniometer bases
- Starter kits and bundles
- Cryo EM tools
- Unipucks and tools
- Dry shipper

Douglas Instruments designs and manufactures robots for protein crystallization. Its contact dispensing mechanism allows for microseeding. It is suited for hanging drop, sitting drop and under oil crystallization. Various software available to set up optimization grids. LCP option available

- Oryx8, Oryx4 and OryxNano Automatic Protein Crystallization Systems

- Liquid Nitrogen containers from Taylor Wharton
- Other small equipment for lab

Gel Company offers;

- DNA gel electrophoresis equipment from ThermoFisher
- PAGE gel electrophoresis equipment from ThermoFisher
- Electrobotters from ThermoFisher
- Combs/Spacers/Plates/Spares for most brands
- Compact Gel docs
- Gel extraction tools

Cambio's Star*FISH paints are highly chromosome-specific and provide robust and even coverage of individual chromosomes, unlike paints based on cloned libraries. Chromosome paints for human and mouse

- Detection kits and reagents
- CE marked probes from Cytotest

Life Chemicals Inc. is a well-known producer and supplier of HTS compounds and provider of custom synthesis and computational chemistry services for pharmaceutical, biotech, agrochemical companies, universities and academic institutions across the globe.

- HTS Screening compounds
- 62,000 building blocks and compounds
- Receptor based target libraries
- Fragment libraries
- Ligand based focussed libraries
- Cheminformatics libraries
- Diversity libraries

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