

GENEWIZ, Inc. DNA Sequencing Service Details for USC Norris Comprehensive Cancer Center DNA Core

DNA Sequencing Services

- **Pre-Mixed**
 - Provide template and primer, mixed into the same tube*
- **Pre-Defined**
 - Provide template and primer in separate tubes*
- **Custom**
 - Full-service for samples with unknown concentration
 - Sample types include:
 - Plasmids*
 - PCR products (purified and unpurified)*
 - Bacterial clones (colonies and glycerol stock)*
 - Phage with circular genome (supernatant and plaque)*
 - BAC DNA*
 - Template-dependent services include:
 - Measure template concentration and optimize for sequencing
 - Amplify template from clones:
 - ◆ Bacterial colonies
 - ◆ Glycerol stock
 - ◆ Phage plaque
 - ◆ Phage supernatant
 - Clean-up crude PCR products with one band using ExoSAP-IT
 - ◆ Select “unpurified PCR product” as the DNA type and “PCR clean-up” as the Special Request when placing DNA sequencing order for this service option

**Please prepare all DNA sequencing samples according to Sample Submission Guidelines*

Note: GENEWIZ Universal Primers available for all DNA sequencing services, free of charge

DNA Sequencing Results & Support

- **Fast & Convenient:** Data reported the morning following sample pick-up; results are provided via email in an easily accessible web link
 - Monday – Friday: Results reported by 10:00 a.m.
 - Saturday: Results reported by 12:00 p.m.
- **High Quality:** Read length 750-1000bp, >700bp Phred20; Quality Score and Contiguous Read Length (CRL) provided with each read
- **Best-in-Class Proprietary Protocols:** Difficult template sequencing, including GC-rich DNA and RNAi
- **Online Ordering & Data Retrieval:** Accessible 24/7
- **Technical Support:** Award-winning, easily accessible technical support available to answer questions and help with any troubleshooting needs, Monday – Friday, 8:00 a.m. – 8:00 p.m. (ET)



GENEWIZ, Inc. Contact Information

Amanda Skeen, Sales Executive

amanda.skeen@geneviz.com

Mobile: 310-259-9775

Technical Support: 1-877-GENEWIZ (436-3949)



GENEWIZ, Inc. DNA Sequencing Service Details for USC Norris Comprehensive Cancer Center DNA Core

| GENEWIZ Free Universal Primers | | |
|---------------------------------------|--------|--|
| T7 | 20 mer | 5'-d(TAA TAC GAC TCA CTA TAG GG)-3' |
| T3 | 20 mer | 5'-d(ATT AAC CCT CAC TAA AGG GA)-3' |
| SP6 | 19 mer | 5'-d(GAT TTA GGT GAC ACT ATA G)-3' |
| BGHR | 18 mer | 5'-d(TAG AAG GCA CAG TCG AGG)-3' |
| M13F(-21) | 18 mer | 5'-d(TGT AAA ACG ACG GCC AGT)-3' |
| M13F(-47) | 24 mer | 5'-d(CGC CAG GGT TTT CCC AGT CAC GAC)-3' |
| M13R | 17 mer | 5'-d(CAG GAA ACA GCT ATG AC)-3' |
| T7 Term | 19 mer | 5'-d(GCT AGT TAT TGC TCA GCG G)-3' |
| CMV-Forward | 21 mer | 5'-d(CGC AAA TGG GCG GTA GGC GTG)-3' |
| 3AOX1 | 21 mer | 5'-d(GCA AAT GGC ATT CTG ACA TCC)-3' |
| 5AOX1 | 21 mer | 5'-d(GAC TGG TTC CAA TTG ACA AGC)-3' |
| 5GEX | 23 mer | 5'-d(GGG CTG GCA AGC CAC GTT TGG TG)-3' |
| 3GEX | 23 mer | 5'-d(CCG GGA GCT GCA TGT GTC AGA GG)-3' |
| pFastBacF | 20 mer | 5'-d(GGA TTA TTC ATA CCG TCC CA)-3' |
| pFastBacR | 20 mer | 5'-d(CAA ATG TGG TAT GGC TGA TT)-3' |
| pBAD Forward | 20 mer | 5'-d(ATG CCA TAG CAT TTT TAT CC)-3' |
| pBAD Reverse | 18 mer | 5'-d(GAT TTA ATC TGT ATC AGG)-3' |
| M13F | 18 mer | 5'-d(GGT TTT CCC AGT CAC GAC)-3' |
| T7 EEV | 22 mer | 5'-d(ATG TCG TAA TAA CCC CGC CCC G)-3' |
| V5 | 21 mer | 5'-d(ACC GAG GAG AGG GTT AGG GAT)-3' |
| Myc | 24 mer | 5'-d(GCA TCA ATG CAG AAG CTG ATC TCA)-3' |
| Neo-F | 20 mer | 5'-d(CGT TGG C TA CCC GTG ATA TT)-3' |
| Neo-R | 18 mer | 5'-d(TGG ATA CTT TCT CGG CAG)-3' |
| EGFP-C | 22 mer | 5'-d(CAT GGT CCT GCT GGA GTT CGT G)-3' |
| EGFP-N | 21 mer | 5'-d(CGT CGC CGT CCA GCT CGA CCA)-3' |
| SV40pA-R | 20 mer | 5'-d(GAA ATT TGT GAT GCT ATT GC)-3' |
| SV40-Promoter | 20 mer | 5'-d(TAT TTA TGC AGA GGC CGA GG)-3' |

GENEWIZ, Inc. DNA Sequencing Service Details for USC Norris Comprehensive Cancer Center DNA Core

DNA Sequencing Sample Submission Guidelines

Three Easy Steps for Sample Submission:

1. Orders with <48 samples: Use 8-strip PCR tubes to streamline preparation and processing; please label tubes with your initials and the sample number.
Orders with >48 samples: Receive a discount by using a 96-well PCR plate and arranging samples vertically (A1 – H1).
2. Dilute sequencing primer to 5 μ M (pmol/ μ l) using water; each reaction requires 5 μ l. GENEWIZ Universal Primers are also available, at no additional charge.
3. Use specifications in the following tables to prepare samples based on your order type.

Sample Preparation (Pre-Mixed; Pre-Defined; Custom)

Pre-Mixed: In the same tube, mix template (10 μ l) and primer (5 μ l) according to the following specifications:

| DNA Type | DNA Length | Template Concentration in 10 μ l | Template Total Mass | Primer Total Picomoles | Pre-Mixed Volume* (Template + Primer) |
|----------------------|--------------|--------------------------------------|---------------------|------------------------|---------------------------------------|
| Plasmid | <6 kb | ~50ng/ μ l | ~500ng | 25pmol | 15 μ l |
| | 6-10 kb | ~80ng/ μ l | ~800ng | | |
| | >10 kb | ~100ng/ μ l | ~1000ng | | |
| Purified PCR Product | <500 bp | ~1ng/ μ l | ~10ng | 25pmol | 15 μ l |
| | 500-1000 bp | ~2ng/ μ l | ~20ng | | |
| | 1000-2000 bp | ~4ng/ μ l | ~40ng | | |
| | 2000-4000 bp | ~6ng/ μ l | ~60ng | | |
| | >4000 bp | Treat as plasmid | Treat as plasmid | | |

**If using a GENEWIZ Universal Primer, please submit the required amount of template in 10 μ l*



GENEWIZ, Inc. Contact Information

Amanda Skeen, Sales Executive
amanda.skeen@geneviz.com
Mobile: 310-259-9775

Technical Support: 1-877-GENEWIZ (436-3949)



GENEWIZ, Inc. DNA Sequencing Service Details for USC Norris Comprehensive Cancer Center DNA Core

Pre-Defined: In separate tubes, provide template (10 μ l) and primer (5 μ l) according to the following specifications:

| DNA Type | DNA Length | Template Concentration in 10 μ l | Template Total Mass | Template Volume/Reaction | Primer Concentration μ M (pmol/10 μ l) | Primer Volume/Reaction |
|----------------------|--------------|--------------------------------------|---------------------|--------------------------|--|------------------------|
| Plasmid | <6 kb | ~50ng/ μ l | ~500ng | 10 μ l | 5 μ l | 5 μ l |
| | 6-10 kb | ~80ng/ μ l | ~800ng | | | |
| | >10 kb | ~100ng/ μ l | ~1000ng | | | |
| Purified PCR Product | <500 bp | ~1ng/ μ l | ~10ng | 10 μ l | 5 μ l | 5 μ l |
| | 500-1000 bp | ~2ng/ μ l | ~20ng | | | |
| | 1000-2000 bp | ~4ng/ μ l | ~40ng | | | |
| | 2000-4000 bp | ~6ng/ μ l | ~60ng | | | |
| | >4000 bp | Treat as plasmid | Treat as plasmid | | | |

**See [Technical Notes](#) for tips on how to purify PCR products*

Custom: GENEWIZ will determine template concentration, optimize for sequencing, and mix with primer; if available, please provide template concentration according to the following specifications:

| DNA Type | DNA Length | Template Concentration | Template Total Mass (recommended) | Template Volume/Reaction | Primer Concentration μ M (pmol/10 μ l) | Primer Volume/Reaction |
|----------------------|------------|------------------------|-----------------------------------|--------------------------|--|------------------------|
| Plasmid | Any Size | Unknown | At least 500ng | 10 μ l | 5 μ l | 5 μ l |
| Purified PCR Product | Any Size | Unknown | At least 40ng | 10 μ l | 5 μ l | 5 μ l |

**Please submit the same amount of DNA required for purified PCR products when submitting unpurified PCR products*

For more Sample Submission Guidelines, including details for Bacteria & Phage, Tubes & Plates, and Technical Notes, please [click here](#).



GENEWIZ, Inc. Contact Information

Amanda Skeen, Sales Executive
amanda.skeen@geneviz.com
Mobile: 310-259-9775

Technical Support: 1-877-GENEWIZ (436-3949)



GENEWIZ, Inc. DNA Sequencing Service Details for USC Norris Comprehensive Cancer Center DNA Core

GENEWIZ Gene Synthesis

Gene synthesis is an efficient and cost-effective alternative to molecular cloning for custom gene production. GENEWIZ can synthesize codon-optimized cDNA, gene variants, artificially designed DNA, or any other sequence for your research. Provide a nucleotide or amino acid, and GENEWIZ will ship your gene cloned into the plasmid of your choice.

GENEWIZ gene synthesis services include:

- Full Service
- Fast & Reliable Turnaround
- Expert Project Management
- Personalized Consultation & Support
- Intellectual Property Security

Standard deliverables include:

- 2-5µg of lyophilized plasmid containing your desired synthetic construct
- Certificate of Analysis (COA), including restriction digest
- Sequence trace data with alignment
- Sequence of synthetic gene alone and in vector

Fast turnaround time:

| Synthetic Gene Length | Standard Delivery Time* |
|-----------------------|-------------------------|
| <1.5 kb | 8-10 Business Days |
| 1.5-3 kb | 14-17 Business Days |
| 3-5 kb | 20-25 Business Days |
| 5-6 kb | 25-30 Business Days |
| >6 kb | Custom Quote |

For more information about GENEWIZ Gene Synthesis, please [click here](#).



GENEWIZ, Inc. Contact Information

Amanda Skeen, Sales Executive
amanda.skeen@genewiz.com
Mobile: 310-259-9775

Technical Support: 1-877-GENEWIZ (436-3949)

