

# build your next breakthrough

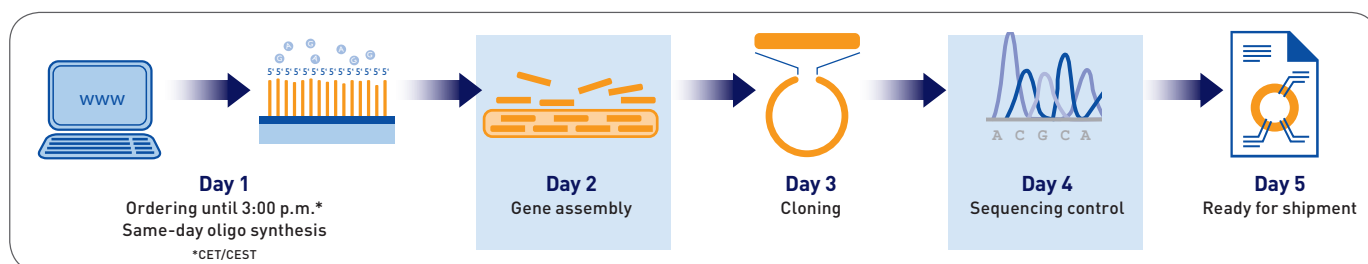
invitrogen<sup>™</sup>  
by *life* technologies<sup>™</sup>

## GeneArt<sup>®</sup> gene synthesis and services

Gene synthesis has become the most cost-effective, time- and resource-saving method for obtaining nearly any desired DNA construct, outperforming conventional molecular biology techniques in many aspects—from performance to stability and quality.

### GeneArt<sup>®</sup> gene synthesis tools go beyond traditional synthesis and enable you to:

- Improve protein expression with proprietary GeneOptimizer<sup>®</sup> technology
- Gain access to hard-to-clone constructs, long complex DNAs, and customized vectors
- Create unlimited numbers of mutants for screening experiments
- Overcome RNAi inactivation
- Engineer proteins to improve enzymes, or to humanize and/or increase binding affinities of antibodies



### Select GeneArt<sup>®</sup> tools and services when you want:

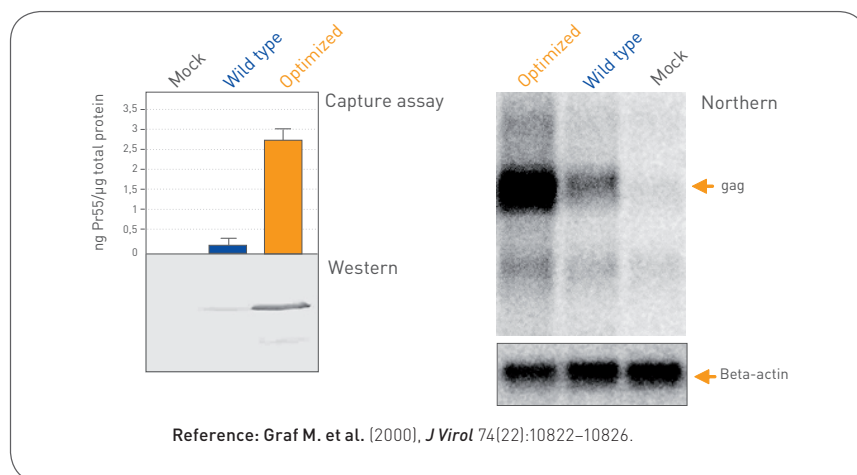
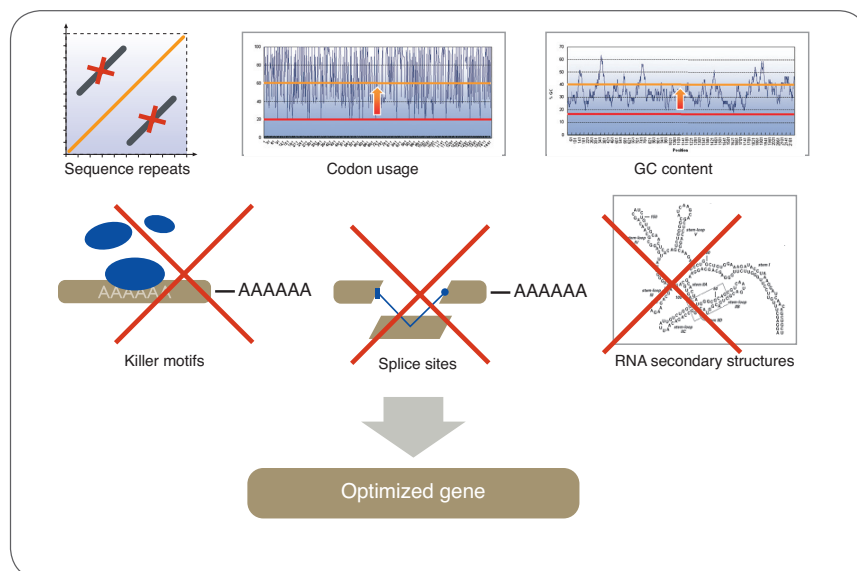
- **Fast access to your construct**—1 kb of DNA synthesized in as little as 5 business days
- **Competitive pricing**—excellent value on cloned DNA
- **Custom service**—your DNA delivered in the vector of your choice, in your desired scale and format
- **Quality products**—manufactured under an ISO 9001 Quality System
- **Confidentiality**—all in-house sequence analyses, syntheses, and storage
- **Personalized support**—superior service from project design to post-production technical support
- **Efficient ordering**—100% fully automated ordering and processing

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## GeneArt® GeneOptimizer® technology

Our proprietary GeneOptimizer® algorithm delivers proven increases in protein yield through sequence optimization. By evaluating many important expression parameters in parallel, GeneOptimizer® technology generates up to 500,000 variants of your target sequence in an evolutionary approach and selects the best match for your specific requirements. Select GeneOptimizer® technology when you need:

- Removal of introns
- Knockout of cryptic splice sites and RNA-destabilizing sequence elements
- Increased RNA stability
- Adaptation of codon usage
- Extensive mutagenesis
- Flexible combination of functional domains
- Introduction of restriction sites
- Epitope shuffling
- Consideration of immunomodulatory CpG motifs



For more information, go to [www.invitrogen.com/genesynthesis](http://www.invitrogen.com/genesynthesis)

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