



Cloning Guidelines

Twist Bioscience’s Gene Fragments are double-stranded DNA, 300 to 1800 base pairs in length. These high-quality fragments come with unique 5’ and 3’ adapter sequences. The adapters sequences are:



FEATURES

- Industry-leading error rates (1:3,000bp)
- 0.3 to 1.8kb
- Compatible with several downstream cloning strategies

Cloning

Design your fragments to include internal cloning sites.



Design your fragments to include internal restriction enzyme sites (pink)

A. RESTRICTION ENZYME CLONING



For Restriction Enzyme cloning, add the flanking sites (pink) to dsDNA fragments (BsaI, a type IIS enzyme, in this example)

B. GATEWAY® CLONING



For Gateway® cloning, add the flanking attB sites (pink) in your dsDNA fragment design

PCR Amplification

Flexibility is further supported through easy removal of the adapter sequences, allowing streamlined customization of workflow.

A. INTERNAL PRIMERS TO REMOVE ADAPTER SEQUENCE

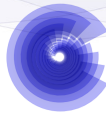


Pink arrows highlight PCR priming sites

B. INTERNAL PRIMERS TO ADD HOMOLGY



Add homology tails to PCR primers for downstream seamless cloning



Don't Want to Clone?

We Offer Clonal Genes at 9¢/bp

Twist Bioscience's Clonal Genes offers 100% NGS verification on the gene sequence, ensuring what you get is exactly how you design it.

Choose between a variety of Twist cloning and expression vectors. Have your own vector? Not a problem, Twist can synthesize your gene and clone it into your vector of choice.

Simply visit the easy-to-use online ordering platform at **ecommerce.twistdna.com** and get a quote in 30 seconds.

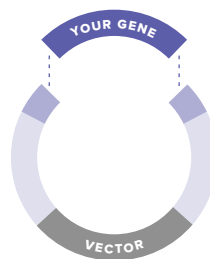
HOW TO ORDER



① ORDER ONLINE



② TWIST SYNTHESIZES GENE



③ YOUR GENE CLONED AND NGS-VERIFIED

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