



**New to Molecular Biology?**

**Start your career off on the right path.  
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The free NEB Starter Pack is available to all research students, PhD students, PostDocs and everyone who is starting their career or a new project in Molecular Biology\*.



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product!

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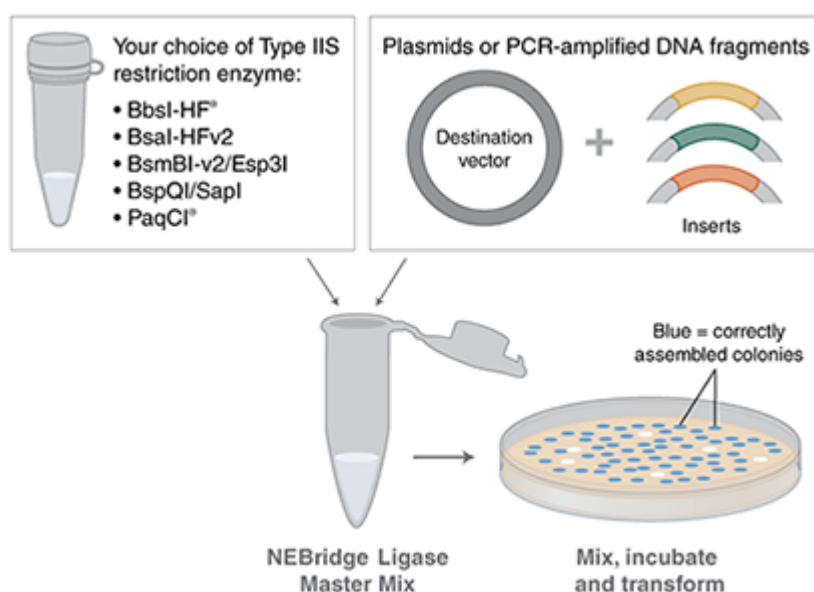
\*Offer available through to Jan. 31st, 2024, or while stocks last. Limited to one pack/person. Content may vary from those shown. The 20% discount voucher/offer is void where prohibited by regional or institutional laws or regulations. Please ask your local distributor for details and availability. For full terms and conditions under GDPR, please visit [www.neb-online.eu/starterpack](https://www.neb-online.eu/starterpack).



## Ready to perform Golden Gate Assembly with the flexibility of using any Type IIS restriction enzyme?

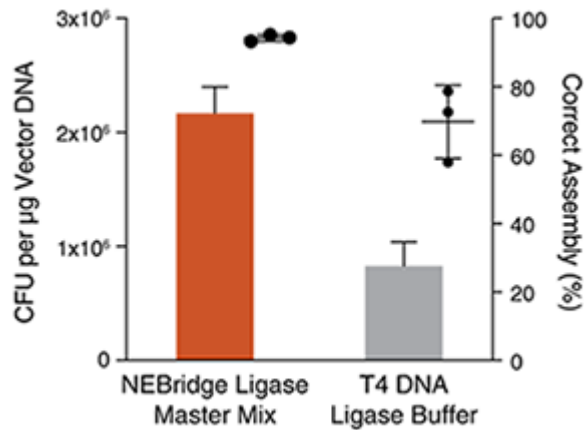
### Try a NEBridge® Ligase Master Mix sample!

- Optimized for highly efficient and accurate Golden Gate Assembly
- Convenient 3X Master Mix format
- Use with your choice of NEB Type IIS restriction enzymes
- Use for seamless cloning of single inserts, complex assemblies, or library construction
- Ideal for ordered assembly of multiple fragments (2-25+) in a single reaction
- Simplified reaction setup with our suite of primer design and ligase fidelity tools



*Workflow for NEBridge Ligase Master Mix*

## NEBridge Ligase Master Mix outperforms T4 DNA Ligase in efficiency and accuracy



The total transformants and percentage of correct assemblies (blue colonies) were reported as the average result of three replicates with the standard deviation from the mean. The reaction with NEBridge Ligase Master Mix generated  $2.2 \pm 0.2 \times 10^6$  correctly assembled blue colonies per  $\mu\text{g}$  vector DNA with  $94.3 \pm 1\%$  fidelity, while the reaction with T4 DNA Ligase Buffer generated  $0.8 \pm 2.1 \times 10^5$  correctly assembled blue colonies per  $\mu\text{g}$  vector DNA with  $69.8 \pm 10.7\%$  fidelity.

[Learn More](#)

[Request a Sample from your local distributor](#)



### New product:

## Authenticase™

Authenticase is a proprietary mixture of structure-specific nucleases capable of recognizing and cleaving outside mismatch and indel (insertion and/or deletion) regions, ranging from 1-10 basepairs on double-stranded DNA. The formulation has limited non-specific activity on homoduplex regions of DNA.

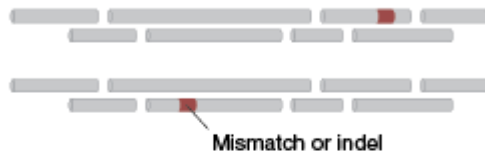
### Advantages:

- Screen less colonies and save time during gene synthesis
- Improved performance over T7 Endonuclease I when assessing gene editing efficiency

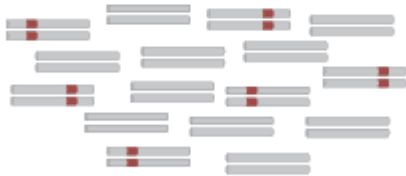
### Applications:

### ERROR CORRECTION During gene synthesis

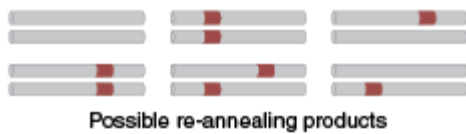
Oligo assembly pool



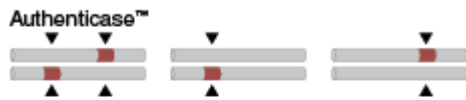
PCR amplification



Denaturation & annealing



Digestion of mismatched duplexes

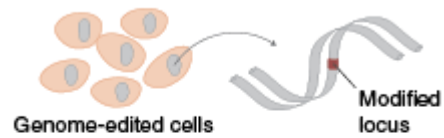


PCR amplification

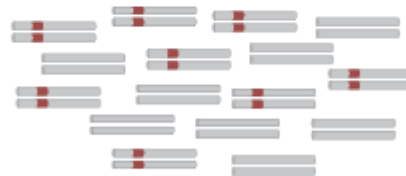


Improved gene synthesis  
& increased accuracy

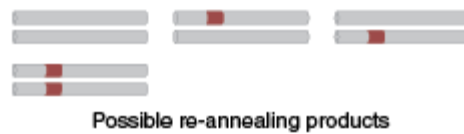
### MISMATCH DETECTION ASSAY to estimate genome editing efficiency



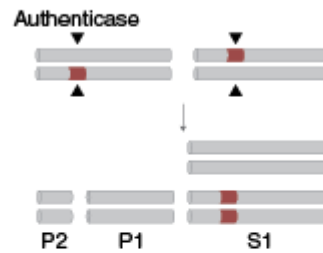
PCR amplification



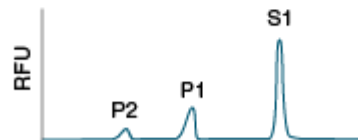
Denaturation & annealing



Digestion of mismatched duplexes



Fragment analysis



Calculates heteroduplex  
DNA population

Product Information

NEB inspired



Gene synthesis workflows often grapple with residual errors in DNA fragments, making traditional error detection methods labor-intensive and expensive. Authenticase™ employs structure-specific enzymes for proficient error correction. Paired with Q5® High-Fidelity DNA Polymerase, it enhances DNA quality and simplifies the synthesis workflow.

Find out more in our latest blog post:

## Superior error detection using Authenticase enhances assembled gene synthesis

[Read Now](#)



## Purify and cleanup PCR, DNA, oligos, and other enzymatic reactions with Monarch®!

### Request a Monarch Sample!

Try a sample of the Monarch PCR & DNA Cleanup Kit (5 µg), designed for the rapid purification, clean up, and concentration of up to 5 µg of high-quality ss- and ds-DNA from PCR, restriction digest, ligation, and other enzymatic reactions. This kit is capable of purification of oligonucleotides, short primers, detergents, and other low-molecular weight reaction components.



- **High Performance:** Achieve high yields (up to 5 µg) and high purity in the purification, cleanup, and concentration of DNA.
- **Highly Concentrated:** Elute in very small volumes, in as little as 6 µl for elution, allowing for highly concentrated DNA.
- **Designed for Sustainability:** Spin column features a unique design to reduce plastic without affecting performance. Column design minimizes buffer retention and contaminant carryover.

Monarch kits are also available for:

- Genomic DNA Purification
- Plasmid Miniprep
- Total RNA Extraction
- RNA Cleanup
- DNA Gel Extraction

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