

Seamless Cloning Kit

Traditional cloning methods rely on restriction enzymes for digestion and ligation, which only allow for specific restriction sites on the vector. This approach is prone to introducing extra base pairs, and when inserting multiple fragments, it requires multiple rounds of digestion and ligation, making the process cumbersome.

Seamless cloning technology is based on the principle of homologous recombination. It relies on the recombination of inserted fragments with the homologous sequences of 15~25 nt at the ends of the linearized vector. In theory, it allows for the cloning of inserted fragments at any desired position in any vector. It offers advantages such as high cloning efficiency, the ability to simultaneously insert multiple fragments, and rapid reactions.

Compared to the previous generation product, the upgraded LightNing™ DNA Assembly Mix Plus maintains a remarkably high cloning efficiency, and it significantly extends the shelf life. After being stored at 37°C for one week, its performance remains nearly unchanged, greatly enhancing the user-friendliness of the product.



Products Features

• Simple and Convenient

Compatible with PCR and restriction enzyme digestion product, eliminating the need for tedious purification steps

• High Positive Rate

High positive rate of over 95% for cloning of single fragment into the vector

• Fast Reaction

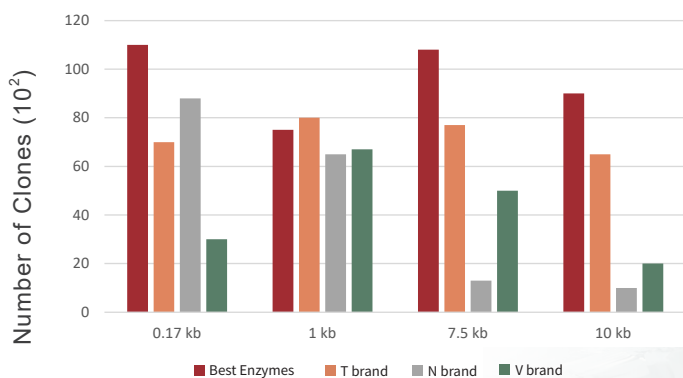
Significantly shortened reaction time, with the fastest completion in 5 minutes

• Compatible with Single and Multi-Fragment Insertion

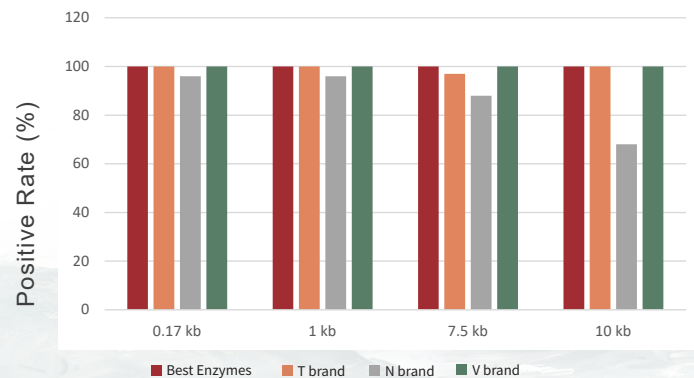
Allows simultaneous insertion of single or multiple fragments, eliminating the need for repetitive purification and digestion steps

Technical Features

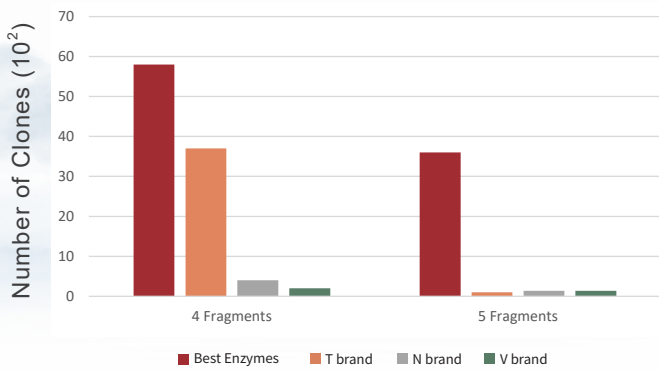
High cloning positive rate



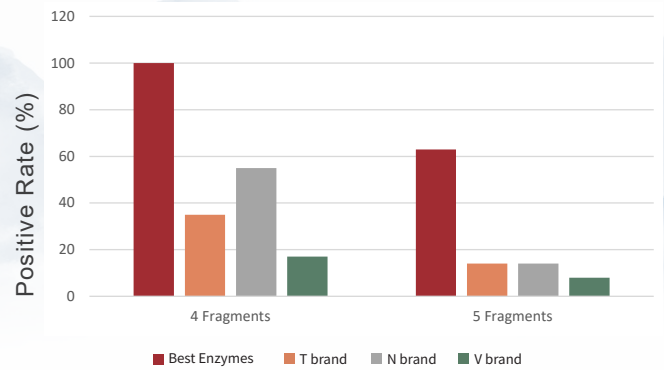
Colony count for single fragment insertion



Positive rate for single fragment insertion



Colony count for multiple fragments insertion

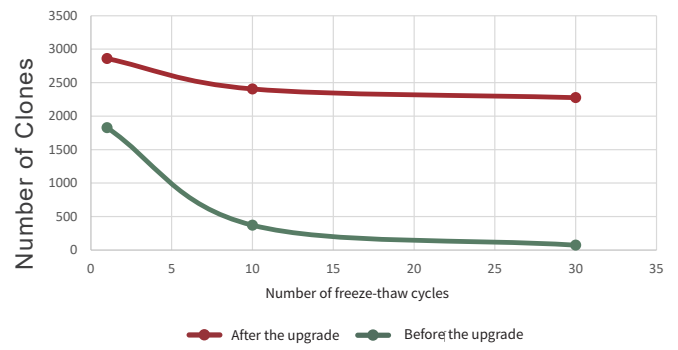
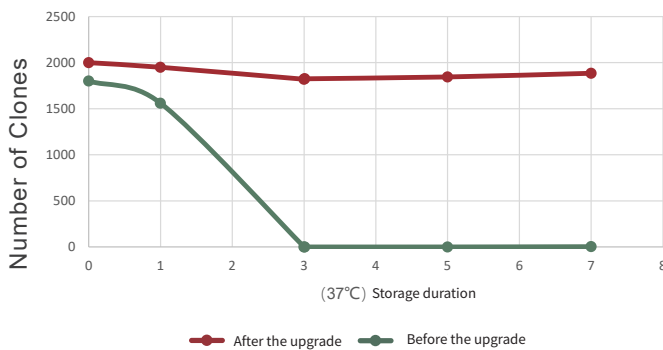


Positive rate for multiple fragments insertion

In single fragment insertion scenarios: LightNing™ DNA Assembly Mix Plus has advantages in both the number of colonies and the positive rate for different fragment lengths

In multiple fragments insertion scenarios, LightNing™ DNA Assembly Mix Plus demonstrates a significant advantage in both the number of colonies and the positive rate.

Excellent Preservation Performance



The upgraded LightNing™ DNA Assembly Mix Plus offers longer storage time compared to the previous version, with the ability to withstand temperatures of 37°C for over a week. It still has stable performance after 30 freeze-thaw cycles (Data obtained from a 5-fragment insertion experiment).

Ordering Information

REF No.	Name	Specs	Price (¥)
EG21202S	LightNing™ DNA Assembly Mix Plus	50 rxns	1160

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