FastGene®

Kickspeed DNA Ligation kit

Cat.#	Size
FG-LK30	30 reactions
FG-LK60	60 reactions

Store at -20℃

Supplied with: **FastGene® Kickspeed DNA Ligase**
2X Kickspeed DNA Ligase Buffer
Sterile water

For Research Use Only. Not for use in diagnostic procedures.

ISO9001

Product description

FastGene® Kickspeed DNA Ligation kit is formulated for quick ligation of DNA fragments with cohesive ends within 5 min at room temperature. This product uses T4 DNA Ligase (Cat.# FG-T4) and 2X Kickspeed DNA Ligation buffer.

Characteristics

- 5 min ligation reaction with all types of DNA fragment
- Reaction at room temperature
- Rapid and efficient Kickspeed Ligation buffer

Applications

- General cloning
- Blunt-end cloning
- TA cloning
- Library construction
- Linker ligation

Cautions

- Prewarm 2X Kickspeed DNA Ligation buffer to room temperature prior to use. We recommend that at least 20 µl are used per reaction. Avoid frequent cycles of freezing and thawing of the buffer.
- Calculate the mole number of vector and insert DNA by measuring their concentration prior to ligation (refer to the equation given above). Use 2 to 3 times (cohesive end DNA ligation) or 5 to 6 times (blunt end ligation) more insert DNA than vector DNA.
- Transformation efficiency reduces rapidly if Kickspeed DNA Ligation mixture is heated.
- Incubation longer than 1 hr is likely to reduce transformation efficiency. Therefore, we recommend that transformation should be carried out after 5~30 min of ligation reaction.

Standard reaction conditions

2X Kickspeed DNA Ligation buffer	10 µl
Kickspeed DNA Ligase	1 µl
Vector DNA (5~30 fmol/µl)[a]	1 µl
Insert DNA (15~90 fmol/µl)[b]	1 µl
Sterile water	up to 20 µl

[a]e.g., 3 Kb, 10 ng = 5 fmol, [b]e.g., 1 Kb, 10 ng = 15 fmol
→ Mix carefully
→ Incubate the mixture at room temperature (25℃) for 5 to 15 min. (Caution : DO NOT heat the mixture for heat inactivation of enzyme. This will dramatically reduces transformation efficiency)
→ Transform 10 µl of the ligated DNA directly into appropriate E. coli cells.
※ How to convert DNA concentration (µg/µl) into molar concentration (mole/L) mole/L = [(µg/µl)/(number of base pairs x 650 dalton)]

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