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EZ-Fusion™ HT Cloning Kit *(Dry Type)*

Cat.#	Size
EZ019TS	8 reactions
EZ019TM	16 reactions
EZ019TL	96 reactions

Expire date:

Store at -20℃

Supplied with: 5X EZ-Fusion™ HT cloning DryMIX
pUC19 control vector linearized (50 ng/μL)
2 kb control insert (40 ng/μL)
Sterile water
DH5α chemically competent *E. coli*
S.O.C media

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

ISO9001 ISO14001 ISO13485

※ If using this kit for the first time, it is highly recommended to visit our website and to read the detailed protocol.

Product description

EZ-Fusion™ HT Cloning Kit *(Dry Type)* is designed for rapid and efficient cloning of PCR-amplified DNA fragments in to any cloning vectors including commercial and customized ones. It is also possible to insert one or more DNA fragments into a cloning vector in a defined orientation. EZ-Fusion™ HT Cloning DryMIX allows terminal 10 to 20 base pair overlapping homologous DNA at the ends of linearized vectors (usually by restriction enzymes) and insert DNA fragments (usually PCR-amplified) to precisely recombine to generate cloning products. In addition, the EZ-Fusion™ HT Cloning kit *(Dry Type)* can be used to clone long DNA fragments with high efficiency. EZ-Fusion™ HT Cloning Kit *(Dry Type)* is provided with a convenient lyophilized format of all the reaction components in a single reaction tube, thereby concising reaction setup and minimizing the variability between reactions

Characteristics

- Ease of use and consistency
- Sub-cloning is unnecessary
- Highly efficient
- Seamless construction
- Flexibility to clone single or multiple fragments
- Can be used to perform site-directed mutagenesis

Applications

- PCR cloning
- HTP cloning
- Multiple fragment cloning
- Gene synthesis
- Gene design
- Mutagenesis
- Domain swapping
- Domain modification

Insert PCR primer design

- 5' region of the primer must contain 18-nt which is identical to the very end of linearized vector (restriction recognition sequence: 6-nt + Vector homology sequence: 12-nt).
- 3' region of the primer must contain the specific sequence for amplifying the gene of interest
- Primer design program is provided in our website TECHNICAL > Tool tab.

EZ-Fusion™ HT Cloning reaction conditions

[a]Insert DNA (PCR-amplified DNA)	10~200 ng
[a]Linearized Cloning vector	50~200 ng
5X EZ-Fusion™ HT Cloning DryMIX	1 tube
[b]Sterile water	up to 10 μl

[a]Vector : Insert molar ratio = 1 : 2
Molar ratio formula = insert size / vector size x vector amount
[b]It is better to prepare the DNA with higher concentration or dissolved in distilled water when the combined volume of vector and insert volume is larger than 6 μl.

→ Incubate at **50℃** for 15 min.
※ Caution: Incubation over 15 min could decrease cloning efficiency
→ Transform the ligated DNA into competent *E. coli* cells.

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