

# Long single strand DNA (LsODN) Preparation Kit

For more information : [http://www.funakoshi.co.jp/exports\\_contents/80479](http://www.funakoshi.co.jp/exports_contents/80479)

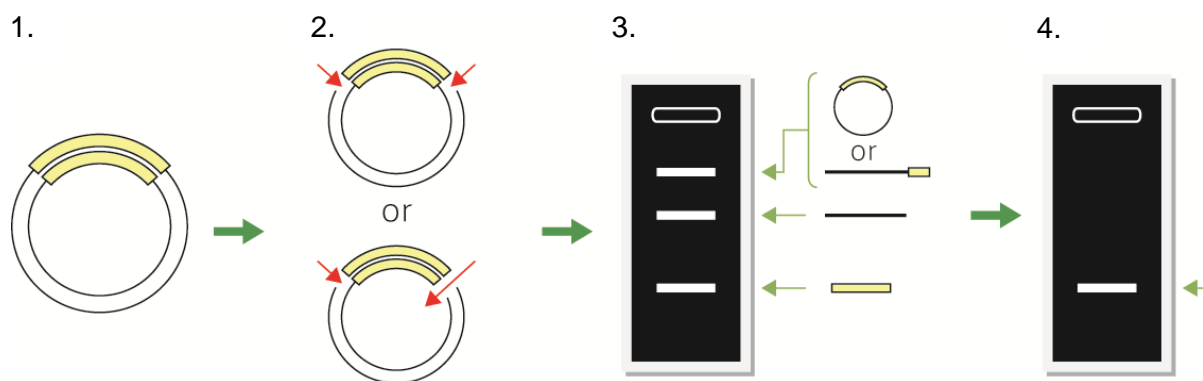
The Long ssDNA (LsODN) Preparation Kits provide a simple and easy method for generating a long ssDNA ( <1,5 kb or < 3,0 kb).

## Features

- A long ssDNA has a defined sequence and length.
- Simple principle and easy procedure.
- High yield and high quality.
- Best for effective knock-in by genome editing.

## Principle

1. The DNA of interest is cloned into a plasmid using a pair of two nicking endonuclease sites or a combination of a nicking endonuclease site and a restriction enzyme site.
2. The resulting plasmid harboring the DNA is digested with a pair of two nicking endonucleases or a combination of a nicking endonuclease and a restriction enzyme.
3. The nicked plasmid is denatured and then subjected to agarose gel electrophoresis.
4. The band corresponding to a long ssDNA is excised and extracted.



※ Nicking endonuclease is not contained in this kit.

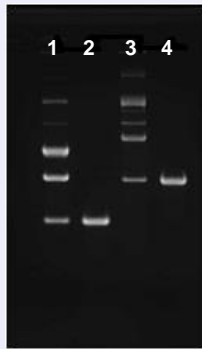
## Kit Contents

### Long ssDNA Preparation Kit

for 1.5 kb ( #DS610 )	for 3.0 kb ( #DS620 )
pLSODN-1 Plasmid 10 µg (0.5 µg/µl)	pLSODN-3 Plasmid 10 µg (0.5 µg/µl)
pLSODN-2D Plasmid 10 µg (0.5 µg/µl)	pLSODN-4D Plasmid 10 µg (0.5 µg/µl)
Denaturing Gel-Loading Buffer 1 ml (100 loadings)	
DynaMarker® Prestain Marker for RNA High 90 µl (18 loadings) *	

\* Prestain Marker for RNA High is available separately.

## Example Data



Lane 1: The double nicked pLSODN-1 harboring 1.5 kb DNA fragment

Lane 2: Purified long ssDNA (1.5 kb)

Lane 3: The double nicked pLSODN-3 harboring 3.0 kb DNA fragment

Lane 4: Purified long ssDNA (3.0 kb)

### Figure : Long ssDNAs prepared by using this kit

A 1.5 kb DNA fragment of interest was cloned between the Nt.BspQI and the Nb.BsrDI sites of pLSODN-1. Similarly, a 3.0 kb DNA fragment of interest was cloned between the Nt.BspQI and the Nb.BsrDI sites of pLSODN-3. The plasmids were digested with Nt.BspQI and Nb.BsrDI. The double nicked plasmids were mixed with Denaturing Gel-loading Buffer and heated, then loaded to conventional non-denaturing agarose gel electrophoresis. The band corresponding to a long ssDNA was excised and extracted.

## Citation

### ssODN-mediated knock-in with CRISPR-Cas for large genomic regions in zygotes.

Yoshimi K, Kunihiro Y, Kaneko T, Nagahora H, Voigt B, Mashimo T. *Nature Communications*. Jan; 20; 7:10431. (2016)  
PMID: 26786405

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ssODN-mediated knock-in with CRISPR-Cas for large genomic regions in zygotes

Kazuto Yoshimi, Yayoi Kunihiro, Takehito Kaneko, Hitoshi Nagahora, Birger Voigt & Tomoji Mashimo

## Product Information

[ Manufacturer : BDL ]

Product Name	Code	Size	Storage
Long ssDNA Preparation Kit for 1.5 kb	DS610	1 kit	-80°C
Long ssDNA Preparation Kit for 3.0 kb	DS620	1 kit	-80°C

### ■ Related Products

[ Manufacturer : BDL ]

Product Name	Code	Size	Storage
DynaMarker, Prestain Marker for RNA High	DM260S	90 µl	-80°C
	DM260	180 µl	-80°C

## Check it out !

For gel excision, our "Gel Pipette" and "Funa-Gel Tip" are recommended.

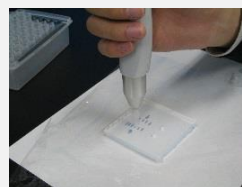
For details :

### Gel Pipette

[http://www.funakoshi.co.jp/exports\\_contents/80506](http://www.funakoshi.co.jp/exports_contents/80506)

### Funa-Gel Tip

[http://www.funakoshi.co.jp/exports\\_contents/80485](http://www.funakoshi.co.jp/exports_contents/80485)



NOTE

- ※ All products here are research use only, not for diagnostic use.
- ※ Specs might be changed for improvement without notice.
- ※ Numbers after "#" represents product code.

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- ※ Please contact your local distributors for orders, quote request and inquiry.

Your Local Distributor

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