

Efficient Knock-In by Genome Editing

Long single strand DNA (LSODN, LSSDNA) Preparation Kit

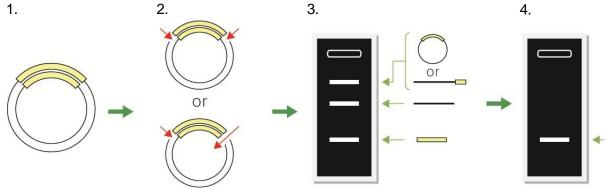
The Long ssDNA (LsODN, LssDNA) Preparation Kits provide a simple and easy method for generating a long ssDNA (<1.5 kb or < 3.0 kb).

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.



Note: Nicking endonuclease is not included in this kit.

Kit Contents

Long ssDNA Preparation Kit			
for 1.5 kb	for 3.0 kb		
(#DS615)	(#DS625)		
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)		
Nicked pLSODN-1 (1.5 kb Fragment)	Nicked pLSODN-3 (3.0 kb Fragment)		
Denaturing Gel-Loading Buffer 1 ml (100 loadings)*			
Long ssDNA Gel Extraction Kit for 3kb (25 preps) *			

^{*} Denaturing Gel-Loading Buffer and Long ssDNA Gel Extraction Kit are 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.BsrD. The double nicked plasmids were mixed with Denaturing Gelloading 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., et al., Nature Communications. Jan; 20; 7:10431. (2016) PMID: 26786405

Product Information

[Manufacturer : BDL]

Product Name	Code	Size	Storage
Long ssDNA Preparation Kit for 1.5 kb	DS615	1 kit	RT + -20°C
Long ssDNA Preparation Kit for 3.0 kb	DS625	1 kit	RT + -20°C

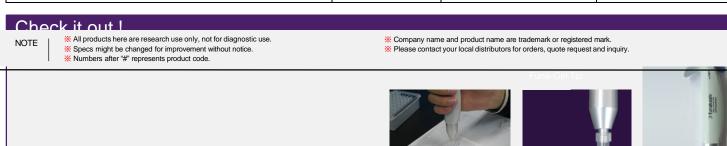
Note: Price is different between academic and commercial customers. Please contact your local distributor.

■ Related Products

[Manufacturer : BDL]

Product Name	Code	Size	Storage
Denaturing Gel-Loading Buffer	DS612	2 x 1 ml	-20°C
	DS611	5 x 1 ml	-20°C
Dec Let Neve	0.1	6 :	21
Product Name	Code	Size	Storage

Product Name	Code	Size	Storage
Long ssDNA Gel Extraction Kit for 3kb	DS640	25 preps	RT



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