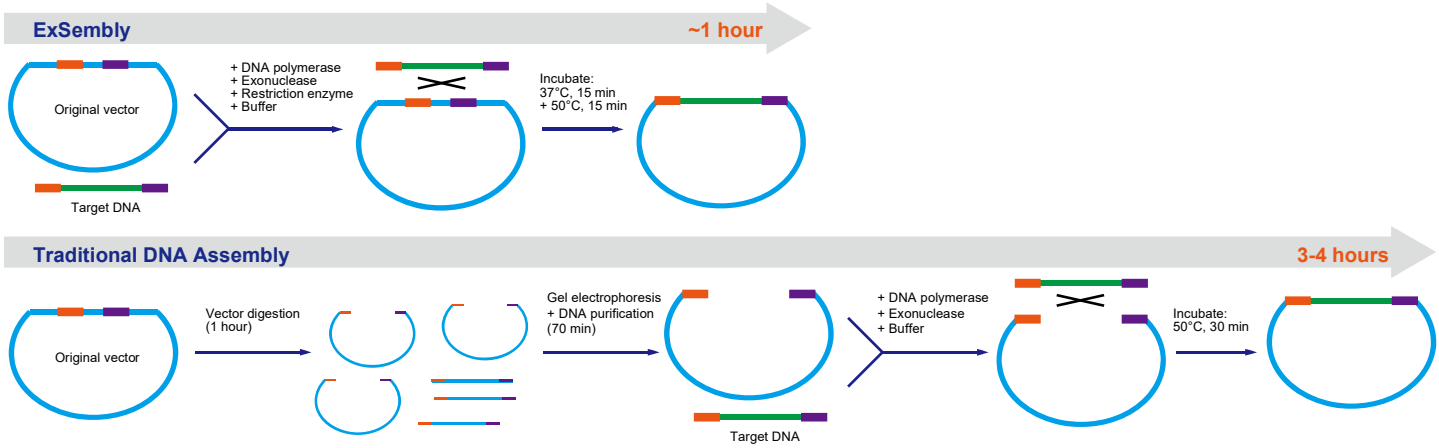
LIFESCT
Life Scientists' Service Center

ExSembly™ Cloning Mix

ExSembly™ Cloning Master Mix is developed and manufactured by Chesapeake Genomic Systems, exclusively distributed by LifeSct. ExSembly™ cloning technology enables rapid, single-step, high-efficiency homology-based insertion of any amplified DNA product into a CIRCULAR vector.

- **One step**: combines circular vector linearization and homology-based assembly.
- **Rapid**: saves 2-3 hours by eliminating vector digestion and gel purification steps.
- **Efficient**: Typically >95% of colonies bear the correctly inserted DNA fragment.
- **Large scale**: accommodates up to 500 ng plasmid DNA in one reaction, resulting in more colonies.
- **Cost-effective**: eliminates vector digestion, gel electrophoresis and purification costs, saving up to 50%.



Product Name	Cat. #	Size	Price
2× ExSembly™ Cloning Master Mix	M0005	10 rxns	$169

Publications

1. Galactomannan utilization by Cellvibrio japonicus relies on a single essential α-galactosidase encoded by the aga27A gene.

Publication: *Molecular Microbiology* Product: 2× ExSembly™ Cloning Master Mix

2. mRNA decapping activators Pat1 and Dhh1 regulate transcript abundance and translation to tune cellular responses to nutrient availability.

Publication: *Nucleic Acids Research* Product: 2× ExSembly™ Cloning Master Mix

Contact Us

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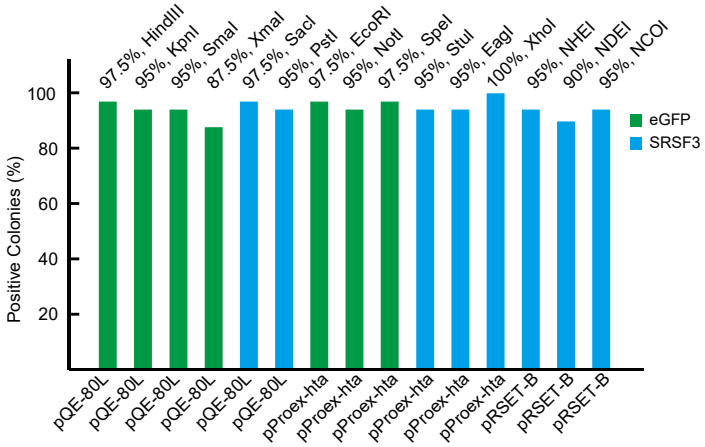
Scan the code to read more

Case Study

Restriction enzyme compatibility

ORFs of eGFP or human SRSF3 were PCR-amplified and assembled into vectors (pQE-80L, pProex-hta, pRSET-B) using ExSembly™ Master Mix. ~200 ng vector DNA was used in each ExSembly™ reaction. ExSembly™ products were purified using a DNA mini-spin column and transformed to DH10B electrocompetent cells and plated on LB/Ampicillin plates. Forty colonies were picked from each reaction to perform colony PCR screening. Percent positive clones are shown in Figure 1 for each of 15 common restriction enzymes.



Colony PCR screening

Gene name: eGFP, 684 bp; Vector: pQE-80L. 4852 bp.

5' primer: TCCGCATGCGAGCTCGGTACgcccgccatgaagatcgagt. Up case bases are DNA fragment 148-167 of pQE-80L. Lower case bases are from the 5' end of eGFPD;
3' primer: AGTCCAAGCTCAGCTAATTAtcatcgagctcgagatctgg. Up case bases are reversely complement with DNA fragment 192-211 of pQE-80L. Lower case bases are reversely complement with 3'end of eGFP.

Restriction enzymes digesting the vector: KpnI and HindIII

Colonies were screened by colony PCR using the primers listed above. Both negative and positive controls were used. The positive control using pMax-GFP as template; no template DNA was used in negative controls.

	NEB 1	NEB 2	ExSembly 1	ExSembly 2
Vector DNA used (μg)	3	3	0.2	0.6
Number of colonies	81	~1,200	~3,000	>10,000
Time spent	~3 hours	~2 hours	~1 hours	~1 hours
Positive rate tested	>90%	100% (8/8)	100% (12/12)	>90%

Related Products

Product Name	Cat. #	Size	Price
LiDirect™ Lightning Genotyping Kit	M0015	400 rxns	$139
2× LiTaq™ PCR Master Mix (+Dye)	M0024	5 ml	$99
LiTaq™ Super-Fidelity PCR Master Mix	M0031	1 ml	$129
LiQuant™ Ultra Green qPCR Master Mix	M0026	500 rxns	$269
LiGreen™ Plus Nucleic Acid Gel Stain	M0050	500 μl	$119
100 bp DNA Ladder	M0042	1 ml	$99
LiScript™ Fast RT Master Mix	M0038	200 rxns	$399
LiScript™ One Step Green RT-qPCR Kit	M0032	250 rxns	$299
LiFect293™ Transfection Reagent	M0002	1 ml	$199
LiQuant™ dsDNA HS Assay Kit	M0065	200 rxns	$89