



Product Sheet

YAC construction vectors kit (ATCC® 77191™)

Please read this **FIRST**



Storage Temp.
Store unopened freeze-dried vial at 4°C



Biosafety Level
1

Intended Use

This product is intended for research use only. It is not intended for any animal or human therapeutic or diagnostic use.

Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: (ATCC® 77191™)

Shipping Information

Freeze-dried *E. coli* containing the plasmid

American Type Culture Collection
PO Box 1549
Manassas, VA 20108 USA
www.atcc.org

800.638.6597 or 703.365.2700
Fax: 703.365.2750
Email: Tech@atcc.org

Or contact your local distributor

Description

This is a kit of the left and right arms of a YL-type *Saccharomyces cerevisiae* yeast artificial chromosome vector (YAC). These YL-type shuttle vectors are useful for construction of genomic libraries. Each plasmid is digested with *Clal* and the cloning enzyme. To recover both ends of a YAC insert as plasmid, DNA of a YAC-containing strain is digested to completion with *BamHI*, *SphI* or *SacI*, diluted, ligated and transformed into *E. coli* (to ampicillin resistance). The insert of a resultant plasmid (which includes the T7 promoter) extends from an end of the YAC insert to the first site of the enzyme used for digestion. Refer to the reference listed below for more specific details about the procedure.

The component vectors, their *Saccharomyces cerevisiae* selectable marker, and their individual ATCC numbers are listed in the table below.

ATCC#	Vector	Yeast Marker
77153	pJS97	URA3
77154	pJS98	TRP1

Designation: YAC construction vectors kit

Distributed In

Escherichia coli HB101

Vector Information

ATCC® NUMBER: 77153™

Designation: pJS97 plasmid in *E. coli* HB101

Description: It contains a promoter, T7, for *in vitro* RNA synthesis and permits recovery of end fragments as plasmids in *E. coli*. The order of major features in this plasmid is: *Clal*/MCS?EcoRI – T7 promoter – ARSH4 – CEN4 – URA3 – SUP11 – pMB1 ori – bla – *SacI* – *BamHI* – *SphI* – TEL.

Vector information:

Vector type: YL-type shuttle vector

Vector size (kb): 7.3

Markers: ampR, URA3, SUP11

Replicons: pMB1, ARSH4

Promoter: T7

Centromere: CEN4

Polylinker sites: *Clal* *NheI* *NruI* *Sall* *SacII* *NotI* *EagI* *BglIII* *EcoRI*

Possible hosts: *E. coli*, *S. cerevisiae*

Suggested hosts: *S. cerevisiae* YPH252 (ATCC 204677), YPH274 (ATCC 76622), YPH857 (ATCC 76628)

Notes:

Restriction digests of the clone gave the following sizes (in kb): *NotI* – 7.4, *BglIII* – 7.4 ; *EcoRI* – 7.4 ; *SacI* – 7.4. –ATCC Staff

ATCC® NUMBER: 77154™ □

Designation: pJS98 plasmid in *E. coli* HB101

Description: This is a YI-type shuttle vector useful for construction of genomic libraries. It contains promoter for *in vitro* RNA synthesis and permits recovery of end fragments as plasmids in *E. coli*. The order of major features in this plasmid is: *Clal*/MCS/EcoRI – T7 promoter – ARSH4 – CEN4 – URA3 – SUP11 – pMB1 ori – bla – *SacI* – *BamHI* – *SphI* – TEL.

Vector information:

Vector type: YL-type shuttle vector

Vector size (kb): 5.6

Markers: ampR, TRP1

Replicons: pMB1, ARSH4

Promoter: T7

Centromere: CEN4

Polylinker sites: *Clal* *BstB1* *NheI* *NruI* *Sall* *SacII* *NotI* *EagI* *BglIII* *EcoRI*

Possible hosts: *E. coli*, *S. cerevisiae*

Suggested hosts: *S. cerevisiae* YPH252 (ATCC 204677), YPH274 (ATCC 76622), YPH857 (ATCC 76628)

Notes:

Restriction digests of the clone gave the following sizes (in kb): *NotI* – 5.5, *BglIII* – 5.5 ; *EcoRI* – 5.5 ; *SacI* – 5.5, *Sall* – 5.5. –ATCC Staff



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Propagation

1. Open vial according to instructions.
2. Aseptically add 0.3 to 0.4 mL of liquid medium to the freeze-dried pellet and mix well. Transfer 100 µL to a test tube containing 5 mL LB + ampicillin (50-100 µg/mL). A loopful of culture can also be streaked on an agar plate of the same. Incubate cultures at 37°C.
3. Isolate DNA using standard plasmid preparation procedures.

References

References and other information relating to this product are available online at www.atcc.org.

Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the current publication of the *Biosafety in Microbiological and Biomedical Laboratories* from the U.S. Department of Health and Human Services Centers for Disease Control and Prevention and National Institutes for Health.

ATCC Warranty

The viability of ATCC® products is warranted for 30 days from the date of shipment, and is valid only if the product is stored and cultured according to the information included on this product information sheet. ATCC lists the media formulation that has been found to be effective for this strain. While other, unspecified media may also produce satisfactory results, a change in media or the absence of an additive from the ATCC recommended media may affect recovery, growth and/or function of this strain. If an alternative medium formulation is used, the ATCC warranty for viability is no longer valid.

Disclaimers

This product is intended for laboratory research purposes only. It is not intended for use in humans.

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Please see the enclosed Material Transfer Agreement (MTA) for further details regarding the use of this product. The MTA is also available on our Web site at www.atcc.org

Additional information on this culture is available on the ATCC web site at www.atcc.org.

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