



Product Sheet

## pRS401 plasmid in *E. coli* (ATCC® 87473™)

Please read this **FIRST**



### 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: pRS401 plasmid in *E. coli* (ATCC® 87473™)

### Shipping Information

Distributed: freeze-dried

American Type Culture Collection  
PO Box 1549  
Manassas, VA 20108 USA  
[www.atcc.org](http://www.atcc.org)

800.638.6597 or 703.365.2700  
Fax: 703.365.2750  
Email: [Tech@atcc.org](mailto:Tech@atcc.org)

Or contact your local distributor

### Description

**Designation:** pRS401 plasmid in *E. coli*

**Distribution Host:**

Distribution host: *Escherichia coli* HB101 (ATCC 33694)

### Propagation

**Growth Conditions**

**Temperature:** 37.0°C

**Medium**

ATCC® Medium 1227: LB Medium (ATCC medium 1065) with 50 mcg/ml ampicillin

### Vector Information

Size (kb): 4.893

DESCRIPTION OF VECTOR:

Intact vector size: 4.893

Type of vector: phagemid

Cloning sites: SacI BstXI SacII EagI NotI SpeI BamHI SmaI PstI ClaI SalI

XhoI Apal KpnI

Polylinker sites: SacI BstXI SacII EagI NotI XbaI SpeI BamHI SmaI PstI EcoRI

EcoRV HindIII ClaI SalI XhoI Apal KpnI

Construction: pJK142

Host range: *Saccharomyces cerevisiae*; *Escherichia coli*

Features (with orientation and position when available):

marker(s): MET15, -, 421-1270

replicon: f1, -, 1860-2316

promoter for in vitro transcription: T7, -, 2486-2505

MCS: KpnI...SacI, -, 2513-2619

promoter for in vitro transcription: T3, -, 2632-2651

promoter: lac, -, 2721-2749

coding sequence: lacZ', -, 2317-2676

replicon: pMB1, 3075-3075

marker(s): ampR, -, 3833-4693

Vector: pRS401 (phagemid)

Promoters: Promoter for in vitro transcription T7

Construction: pJK142

Marker(s):ampR,MET15

Construct size (kb): 4.893

Features: marker(s): MET15

marker(s): ampR

promoter: lac

promoter for in vitro transcription: T3

promoter for in vitro transcription: T7

replicon: f1

replicon: pMB1

MCS: KpnI...SacI

coding sequence: lacZ'

### References

References and other information relating to this product are available online at [www.atcc.org](http://www.atcc.org).

### Notes

Restriction digests of the clone give the following sizes (kb): BamHI--4.9;

EcoRI--3.2, 1.7; XbaI--2.9, 2.0.

- ATCC staff

MET15, MET17 and MET25 are synonymous.

- SGD



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met15 phenotype produces brown colonies when grown on Pb containing media.  
- Yeast 14: 115-132, 1998

pRS401 can be used to generate a gene specific MET15 marker gene disruption cassette for transformation in gene knockout experiments.  
- Yeast 14: 115-132, 1998

This requires two approx. 60nt PCR primers; the 20nts of sequence at the 3' ends of each primer is specific for amplifying the MET15 gene from pRS401, and the 40nts of sequence at the 5' ends matches the genomic sequences flanking the gene of interest.  
- Yeast 14: 115-132, 1998

The 20nt PCR primer sequences for generating the MET15 marker from pRS401 are: 5'-CTGTGCGGTATTTACACCG-3' (left primer) and 5'-AGATTGTACTGAGAGTGAC-3' (right primer).  
- Yeast 14: 115-132, 1998

These same primers can be used to amplify an ADE2 marker gene disruption product from pRS402 (ATCC 87477).  
- Yeast 14: 115-132, 1998



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**

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Additional information on this culture is available on the ATCC web site at [www.atcc.org](http://www.atcc.org).  
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