pRS402 plasmid in E. coli

87477™

Description

Clone type: Vector
Host: *Escherichia coli* HB101 (ATCC 33694)

Storage Conditions

Product format: Frozen

Intended Use

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

BSL 1

ATCC determines the biosafety level of a material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies and procedures as well as any other applicable regulations as enforced by your local or national agencies.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Insert Information

Target gene: phosphoribosylaminoimidazole succinocarboxamide synthetase

Vector Information

Construct size (kb): 5.528
Intact vector size: 5.528
Vector name: pRS402 (phagemid)
Type of vector: phagemid
Construction: pJK142, pASZ11
Host range: *Saccharomyces cerevisiae*; *Escherichia coli*
Cloning sites: SacI; SacII; EagI; NotI; SpeI; BamHI; SmaI; PstI; EcoRI; ClaI; SalI; XhoI; ApaI; KpnI
Insert detection: lacZ', <-, 2952-3311
Markers: ampR; ADE2
MCS: KpnI...SacI, ->, 3148-3250
Polylinker sites: SacI; BstXI; SacII; EagI; NotI; XbaI; SpeI; BamHI; SmaI; PstI; EcoRI; EcoRV; HindIII; ClaI; SalI; XhoI; ApaI; KpnI
Promoters: *In vitro* transcription T7; lac
Replicon: f1, ←, 2495-2951; pMB1, 3710-3710

Growth Conditions

Medium:
ATCC Medium 1227: LB Medium (ATCC medium 1065) with 50 mcg/ml ampicillin
Temperature: 37°C

Notes

Restriction digests of the clone give the following sizes (kb): BamHI--5.5; BglII--3.3, 2.2; EcoRI--5.5.
- ATCC staff

ade2 phenotype produces red colonies when grown on adenine containing media.
- Yeast 14: 115-132, 1998

pRS402 can be used to generate a gene specific ADE2 marker gene disruption cassette for tranformation 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 ADE2 gene from pRS402, 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 ADE2 marker from pRS402 are: 5'-CTGTGCGGTATTTCACACCG-3' (left primer) and 5'-AGATTGTACTGAGAGTGCAC-3' (right
primer).
- Yeast 14: 115-132, 1998

These same primers can be used to amplify a MET15 marker gene disruption product from pRS401 (ATCC 87473).
- Yeast 14: 115-132, 1998

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: pRS402 plasmid in E. coli (ATCC 87477)

References

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

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