pKLAC1-*malE* Control Plasmid

1-800-632-7799
info@neb.com
www.neb.com

N3741S 001121014101

N3741S

20 µg **Lot: 0011210** **Exp: 10/14**

1,000 µg/ml **Store at –20°C**

Description: pKLAC1-*malE* is a control plasmid for the *K. lactis* Expression Kit (#E1000S). The backbone integrative expression vector, pKLAC1, directs high-level expression of recombinant protein from the yeast *Kluyveromyces lactis*. Vector pKLAC1-*malE* carries the *E.coli malE* gene, encoding the maltose binding protein (MBP). pKLAC1-*malE* can be used to test plasmid transformation, cell culture, and protein production procedures. A typical *K. lactis* GG799 strain containing integrated pKLAC1-*malE* will produce > 25 mg/L of MBP (Figure 1).

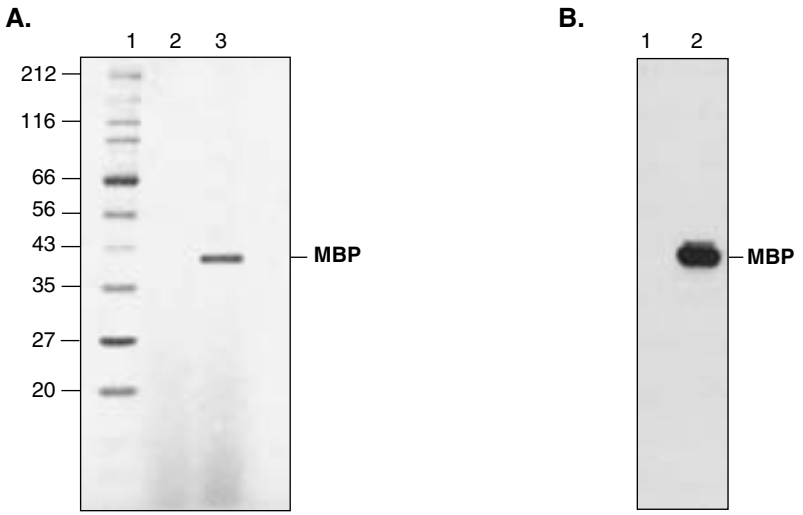

Figure 1: *SDS-polyacrylamide gel electrophoresis of secreted recombinant maltose binding protein (MBP). (A) Detection of secreted MBP by Coomassie staining. Lane 1: Protein Molecular Weight Markers. Lane 2: spent culture medium (15 µl) from wild-type K. lactis cells. Lane 3: spent culture medium (15 µl) from K. lactis cells harboring integrated pKLAC1-malE. (B) Detection of secreted MBP by Western analysis using a polyclonal anti-MBP antibody (NEB #E8031S; 1:2000 dilution) and an anti-rabbit IgG-HRP secondary antibody (1:2000 dilution). Lane 1: culture medium from K. lactis cells (15 µl). Lane 2: culture medium (15 µl) from K. lactis cells containing integrated pKLAC1-malE.*

Additional information such as vector sequences and frequently asked questions, are available at www.neb.com.

Source: pKLAC1-*malE* is isolated from *E. coli* strain ER2268 by a standard plasmid purification procedure.

Supplied in: 10 mM Tris-HCl (pH 7.5), 1 mM EDTA.

Features of pKLAC1-*malE*

- Expression of the fusion gene is under the control of the strong *K. lactis* $P_{LAC4\text{-}PBI}$ promoter.
- *K. lactis* strain GG799 can be used as an expression host.
- Ampicillin resistance for propagation in *E. coli*.
- Fungal acetamidase selectable marker for integration into the *K. lactis* genome.

Usage Notes: NEB 5-alpha Competent *E. coli* (High Efficiency) (NEB #C2987), NEB 5-alpha Electrocompetent *E. coli* (NEB #C2989) and NEB 5-alpha Competent *E. coli* (Subcloning Efficiency) (NEB #C2988) are all recommended for propagation of this control plasmid.

(see other side)

CERTIFICATE OF ANALYSIS

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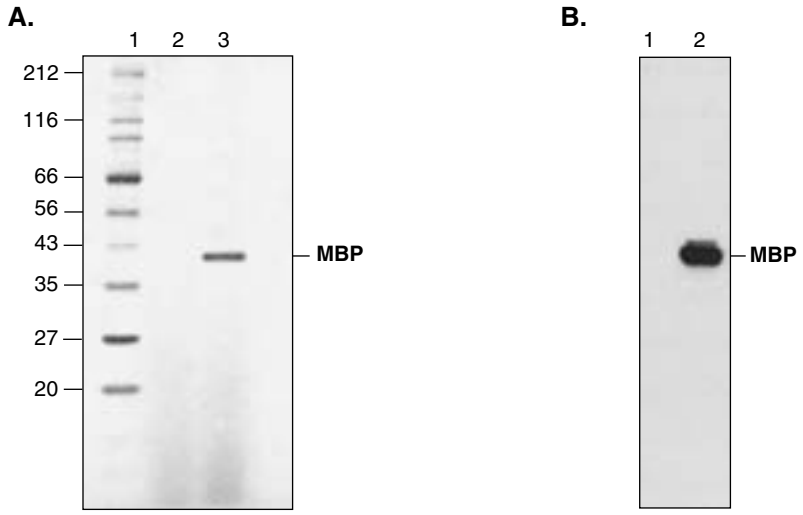

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References:

1. Colussi, P.A. and Taron, C.H. (2005) *Appl. Environ. Microbiol.*, 71, 7092–7098.

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NOTICE TO BUYER/USER: The vector pKLAC1-*malE* is a component of an expression system that was developed from basic research at New England Biolabs, Inc. and DSM Biologics Company B.V. The buyer/user has a non-exclusive sublicense to use this system or any component thereof, including vector pKLAC1-*malE*, for **RESEARCH PURPOSES ONLY.** A license to use this system for manufacture of clinical grade material or commercial purposes is available from New England Biolabs, Inc., or DSM Biologics Company B.V.

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