MCLAB
Molecular Cloning Laboratories

User Manual

Version 2.0
Revision Date: 09/21/2015

Product name: BL21 Competent *E. coli*

Cat #: BL21-100, BL21-196

Description:

Chemically competen *E. coli* cells suitable for transformation and protein expression. This strain does not express the T7 RNA polymerase.

Application:

For protein expression in *E. coli*.

Recommended storage condition:

This product should be stored at -80°C. Thaw on ice only before use. Do not re-freeze.

Genotype:

F^- *dcm ompT hsdS*B(rB^- mB^-) *gal* [*mal*B+]K-12(λS)

Protocol:

1. Remove competent cells from -80°C and thaw competent cells on ice.
2. Add 5–10 ng of DNA to 50-100 µl of the cells and mix by tapping gently.
3. Incubate the cell on ice for 30 minutes.
4. Heat-shock the cells for exactly 30 seconds in the 42°C water bath.
5. Place the cells on ice for 2 min.
6. Add 250-500 µl of room temperature S.O.C medium to the cells
7. Shake at 225 rpm for 1 hour at 37°C.
8. Plate two different volumes of the transformation reaction onto LB plates containing the appropriate antibiotic for plasmid selection.
9. Incubate at 37°C overnight.

Note: Clones may exhibit differences in expression of heterologous genes. We recommend choosing 3–4 transformants when characterizing clones for protein expression.