

User Manual

Version 2.0
Revision Date: 09/21/2015

Product name: BL21(DE3) Competent *E. coli*

Cat #: BS-100, BS-196

Description:

- Chemically competent *E. coli* cells suitable for high yields, high efficiency transformation and protein expression.
- BL21(DE3) cells carry the lambda DE3 lysogen.
- T7 Expression strain.

Application:

- For protein expression in *E. coli*.
- Recommended for use when expressing non-toxic heterologous genes.

Recommended Storage Conditions:

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

Genotype:

F⁻ *ompT hsdSB (rB⁻mB⁻) gal dcm* (DE3)

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.