



Product Insert

SOC Medium

Product:
Liquid SOC Medium

Catalogue number:
BIO-86033 10 x 10ml

Features

- Improves stability of cells
- Maximize transformation efficiency
- Sterile, ready-to-use solution
- Time saving and cost effective

Applications

- For use in the recovery step of bacterial-cell transformation

Description

SOC Medium is a rich medium used primarily to aid recovery of bacterial competent cells following transformation. Use of SOC medium improves the molecular uptake whilst stabilizing the cells rapidly and so maximizing the efficiency of competent cells.

Transformation Procedure for Chemical Competent Cells:

- 1) Remove cells from -70° C and thaw on ice.
- 2) Gently mix cells by lightly flicking the tube. Aliquot ~50-100µl of competent cells into pre-chilled 1.5 ml microcentrifuge tubes.
- 3) Add the DNA solution (≤5µl per 50µl cells) to the cell suspension and gently swirl tubes for a few seconds to mix.
- 4) Incubate on ice for 20 - 30 minutes.
- 5) Place tubes in 42°C water bath for 45 seconds without shaking.
- 6) Replace tubes on ice for ~2 minutes.
- 7) Dilute transformation reaction(s) to 1ml by addition of 900-950µl SOC Medium.
- 8) Shake tubes at 200rpm for 60 minutes at 37°C.
- 9) Plate 100 – 200µl of the transformation mixture on LB agar plates containing the appropriate antibiotic and IPTG/X-Gal if color screening is desired.
- 10) Incubate the plates overnight at an appropriate temperature

Transformation Procedure for Electroporation Competent Cells:

- 1) Remove cells from -70° C and thaw on ice.
- 2) Gently mix cells by lightly flicking tube. Aliquot 20-25µl of competent cells into pre-chilled 1.5 ml microcentrifuge tubes.
- 3) Add 1µl of DNA in low conductivity buffer or in deionised water to the cell suspension and mix by tapping gently.
- 4) Pipette cell/DNA mixture into a pre-chilled 0.1cm cuvette without introducing bubbles.
- 5) Place the cuvette into the electroporation chamber.
- 6) Pulse the sample once. The settings depend on the electroporation system but generally; the optimal setting is 1.8kV and 3.5-4.5ms. Settings must be optimized for different instruments. Please follow the instrument manufacturers instructions.
- 7) Immediately after pulse, add 975µl SOC medium at room temperature.
- 8) Transfer cells to 1.5 ml microcentrifuge tubes.
- 9) Shake tubes at 200rpm for 60 minutes at 37°C.
- 10) Plate 100 – 200µl of the transformation mixture on LB agar plates containing the appropriate antibiotic and IPTG/X-Gal if color screening is desired.
- 11) Incubate the plates overnight at an appropriate temperature

Product Specifications

Batch details:

Batch No: See vial
Pack size: See vial

Storage Conditions:

Short-term: Storage at 2-8°C for up to 12 months.
Long-term: 24 months at -20°C.

Shipping Conditions:

SOC Medium is shipped on Blue Ice

Composition:

2% Peptone ex Casein
0.5% Yeast Extract
10 mM NaCl
2.5 mM KCl
10 mM MgCl₂
10 mM MgSO₄
20 mM Glucose

Associated Products:

Product Name	Pack Size	Cat No
Antibiotic Solutions	10ml	BIO-87025
α-Select Bronze Efficiency	2ml (10 x 200µl)	BIO-85025
BioBlue Competent Cells	1ml (10 x 100µl)	BIO-85036
ElectroSHOX Competent Cells	1ml (10 x 100µl)	BIO-85038

Reference:

Hanahan, D. (1983) Studies on Transformation of *Escherichia coli* with Plasmids

Product Citations :

1. Natarajan, D., Boulter, C.A., *Gene* **161**(2), 195-198 (1995).
2. Von Der Schulenberg J.H., *et al. Appl & Environ. Microbiol.* **67**(1), 270-277 (2001).

Notes

1. This certificate is a declaration of analysis at the time of manufacture
2. Research Use Only.

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