QUICK PROTOCOL

Transforming cyanobacteria with BPP Bioportide™

BPP Bioportide™ Bacterial Transformation Kit for Cyanobacteria

BETTER PEPTIDES PLATFORM

Cat. no. **BPP-BPort-002** No competent cells · no heat shock · no electroporation **Full protocol: bpp-peptides.com/bioportide/protocols**

BEFORE YOU START

- **Grow cells to OD_{750} of 0.4 – 0.6.** Centrifuge 50 ml of cells at 4,000 ×g for 10 min at RT, resuspend pellet in 2 ml of growth medium (e.g., BG-11).
- **Prepare plates** with and without antibiotic, and HATF membranes.
- **Avoid polysaccharides** within the medium during the contact step.
- **Work under sterile conditions** within a laminar-flow hood to prevent contamination.
- **One reaction gives 1 ml** of transformed cells for plating.

10 : 1	10 ng	52 µl
BPP Bioportide™ to nucleic acid, by weight	nucleic acid per reaction	contact volume



20 min	10 min	10 min	60 min	24 h	~8 d
working solution once per vial	complex room temperature	contact room temperature	recovery shaking, light	membrane no antibiotic	membrane with antibiotic

40 min from vial to recovery, **60 min** recovery, colonies after **7–10 days**

1. **Add 10 µl of buffer to one vial of BPP Bioportide™ and mix gently by pipetting; incubate without agitating.** — **20 min** RT
   100 ng/µl of working solution for ten reactions. Store the rest at –20 °C.
2. **Mix 1 µl of working solution with 1 µl of nucleic acid at 10 ng/µl.** — **10 min** RT
   Mix gently by pipetting, leave the 2 µl at room temperature without shaking.
3. **Add 50 µl of the cell suspension to the 2 µl of complex for transformation.** — **10 min** RT
   No heat shock, no pulse. Mix gently by pipetting and incubate without shaking.
4. **Add 950 µl of BG-11 and incubate horizontally under light (10 µmol photons m^{-2} s^{-1}) and 130 rpm.** — **60 min** shaking · light · RT
   Also try your strain's usual recovery time, for example 6 hours.
5. **Spread the cells onto an HATF membrane placed on BG-11 agar plates without antibiotic.** — **24 h** light
6. **Transfer onto BG-11 agar plates with your selection antibiotics.** — **~8 d** light
   Incubate under 20 µmol photons m^{-2} s^{-1} continuous light. Colonies appear after ~7–10 days.

For research use only. Not for use in diagnostic procedures.

Contents, storage and troubleshooting **on the back →**

KIT CONTENTS AND STORAGE

COMPONENT	STORE AT
BPP Bioportide™, lyophilised. 1 µg per vial, ten reactions. Contains HEPES and arginine as buffer material.	**–20 / –80 °C**
BPP Bioportide™ Buffer, 500 µl sterile 50 % glycerol	**–20 / –80 °C**
Working solution, once made up	**–20 °C**

Shipped at room temperature, +20 °C. The lyophilised BPP Bioportide™ is stable for at least 12 weeks at 25 °C and for more than three years at –80 °C. Store at –20 °C or –80 °C on arrival.

YOU SUPPLY

- Cyanobacteria at OD_{750} 0.4 – 0.6, 50 ml concentrated to 2 ml
- Nucleic acid at 10 ng/µl: DNA or RNA, 22 nt to beyond 10 kb
- BG-11 or your usual medium, and agar plates with and without your selection antibiotic
- HATF membranes, centrifuge, and a shaker with light at about 10 µmol photons m^{-2} s^{-1}

IF THE PLATE DOES NOT LOOK RIGHT

Plate shows no colonies

As cyanobacteria grow slowly, please incubate at least 10 days.

Still no colonies after ten days

Check the recovery medium for polysaccharides. Run a known, easy-to-handle plasmid, adapted to your strain's methylation pattern, beside your construct.

Your strain behaves differently

Proceed according to the standard protocol of your strain where this card gives too little detail. If you are not sure, ask the scientists who developed the BPP Bioportide™.

WHAT ONE REACTION GIVES

351 colonies, *Synechocystis* sp. PCC 6803

473 colonies, *S. elongatus* PCC 7942

10 ng of plasmid DNA, 6 h recovery.
351: the variant in the kit; 473: another variant of the same series.

Lot _____

Received _____

Solution made up _____

Full protocol, manual and safety data sheet
bpp-peptides.com/bioportide/protocols

FREE CONSULTATION

The scientists who developed the BPP Bioportide™ adapt the protocol to your strain.

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