



Pseudomonas aeruginosa GFP

10145GFP™

Description

This clone was derived from ATCC 10145 and contains a multicopy vector encoding the green fluorescent protein (*Aequorea victoria*) GFPmut3. This gene is expressed under the control of the P_{lac} promoter (*Escherichia coli*). This construct has been designed for Gram-negative bacteria fluorescence labeling. Ampicillin resistance gene (*bla*) encoded on a plasmid. Confers resistance to 300 µg/mL ampicillin.

Deposited As: *Pseudomonas aeruginosa* GFP

Type strain: No

Storage Conditions

Product format: Frozen

Storage conditions: -80°C or colder

Intended Use

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

BSL 2

ATCC determines the biosafety level of a material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies

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and procedures as well as any other applicable regulations as enforced by your local or national agencies.

ATCC highly recommends that appropriate personal protective equipment is always used when handling vials. For cultures that require storage in liquid nitrogen, it is important to note that some vials may leak when submerged in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vial exploding or blowing off its cap with dangerous force creating flying debris. Unless necessary, ATCC recommends that these cultures be stored in the vapor phase of liquid nitrogen rather than submerged in liquid nitrogen.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Growth Conditions

Medium:

ATCC Medium 2854: Nutrient Agar/Broth with 300 mcg/ml Ampicillin

Temperature: 37°C

Atmosphere: Aerobic

Handling Procedures

1. Open thawed vial according to enclosed instructions or visit www.atcc.org for instructions.

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2. Aseptically transfer the entire contents to a 5-6 mL tube of #2854 broth. Additional test tubes can be inoculated by transferring 0.5 mL of the primary broth tube to these secondary tubes.
 3. Use several drops of the primary broth tube to inoculate a #2854 plate and/or #2845 agar slant.
 4. Incubate at 37°C for 24 hours.
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Notes

This strain produces the green fluorescent protein GFPmut3. This protein has a green or yellow-green color, exhibits fluorescence with UV light (Excitation: 501 nm; Emission: 511 nm). Incubate in the dark as broad-spectrum light may inactivate this pigment. Longer incubations (24-48h) might be required in order to visualize fluorescence.

This strain produces two pigments that may mask each other:

1. Fluorescein: diffusible, green or green-yellow in color, and exhibits fluorescence with short-wave UV light (254 nm). Production is enhanced by growth in an iron-deficient medium.
2. Pyocyanine: diffusible, blue, a chloroform-soluble pigment characteristic of *Pseudomonas aeruginosa*. Incubate in the dark as broad-spectrum light may inactivate this pigment.

The basic requirements for pigment production are not well known, and thus color production by the pseudomonads has been an erratic property that may be lost with repeated subculturing. However, this strain has remained stable for fluorescein and pyocyanin production.

Important: a concentration of 300 µg/mL ampicillin must be maintained at all time during culture. Absence or low concentrations of ampicillin will result in plasmid loss. This strain is stable for up to 5 consecutive passages in the recommended culture conditions.

Additional information on this culture is available on the ATCC® web site at www.atcc.org.

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Pseudomonas aeruginosa* GFP (ATCC 10145GFP)

References

References and other information relating to this material are available at www.atcc.org.

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Revision

This information on this document was last updated on 2026-06-21

Contact Information

ATCC

10801 University Boulevard

Manassas, VA 20110-2209

USA

US telephone: 800-638-6597

Worldwide telephone: +1-703-365-2700

Email: tech@atcc.org or contact your local distributor
