




## Product Sheet


# *Pseudomonas aeruginosa* GFP (ATCC® 10145GFP™)

### Please read this FIRST



Storage Temp.  
**-80°C or colder**

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Biosafety Level  
**2**

### Intended Use

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

### Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: *Pseudomonas aeruginosa* GFP (ATCC® 10145GFP™)

American Type Culture Collection  
PO Box 1549  
Manassas, VA 20108 USA  
[www.atcc.org](http://www.atcc.org)

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Fax: 703.365.2750  
Email: [Tech@atcc.org](mailto:Tech@atcc.org)

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## Description

**Deposited Name:** *Pseudomonas aeruginosa* GFP

**Product Description:** This clone was derived from ATCC® 10145™ and contains a multicopy vector encoding the green fluorescent protein GFPmut3. This gene is expressed under the control of the P<sub>lac</sub> promoter. This construct has been designed for Gram-negative bacteria fluorescence labeling. Ampicillin resistance gene (*b/a*) encoded on a plasmid. Confers resistance to 300 µg/mL ampicillin.

**Vector:** pUCP18-MCSgfpmut3

**Vector size:** 5.492kb

**Vector type:** plasmid

**Marker:** *b/a* (ampR)

**Features:**

**GFPmut3:** fluorescent maker under the control of P<sub>lac</sub> promoter

**Origin of replication:** ori from pRO1600

**Unique restriction sites:** BamHI, EcoRI, EcoRV, SmaI, XhoI

**Double restriction sites:** HindIII, PstI, Sall, XbaI

## Propagation

### Medium

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

### Growth Conditions

**Temperature:** 37°C

**Atmosphere:** Aerobic

### Propagation Procedure

1. Open thawed vial according to enclosed instructions or visit [www.atcc.org](http://www.atcc.org) for instructions.
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 16 hours.

## Notes

This strain forms two colony types. Each type will revert to both types if isolated and subcultured, which is a common trait of pseudomonads

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](http://www.atcc.org).

## References


References and other information relating to this product are available online at [www.atcc.org](http://www.atcc.org).



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### **Biosafety Level: 2**

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the current publication of the *Biosafety in Microbiological and Biomedical Laboratories* from the U.S. Department of Health and Human Services Centers for Disease Control and Prevention and National Institutes for Health.

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Additional information on this culture is available on the ATCC web site at [www.atcc.org](http://www.atcc.org).

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