Pseudomonas protegens Ramette et al.

BAA-477™

Description

Pseudomonas protegens strain Pf-5 was isolated from the root surface of cotton. The strain produces 2, 4-diacetylphloroglucinol, hydrogen cyanide, pyochelin, pyoluteorin, pyoverdine, and pyrrolnitrin. It can be used as a biocontrol agent for supressing a number of plant diseases caused by soil fungi.

Strain designation: Pf-5
Deposited As: *Pseudomonas fluorescens* Migula
Type strain: No

Storage Conditions

Product format: Freeze-dried
Storage conditions: 2°C to 8°C

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 1

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

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 submersed 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 submersed 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 18: Trypticase Soy Agar/Broth
Temperature: 30°C
Atmosphere: Aerobic

Handling Procedures

1. Open vial according to enclosed instructions.
2. Using a single tube of #18 broth (5 to 6 mL), withdraw approximately 0.5 to 1.0

mL with a Pasteur or 1.0 mL pipette. Rehydrate the entire pellet.
3. Aseptically transfer this aliquot back into the broth tube. Mix well.
4. Use several drops of the suspension to inoculate a #18 agar slant and/or plate.
5. Incubate the tubes and plate at 30°C for 24 to 48 hours.

Notes

Colony sectoring and the presence of multiple colony morphologies in cultures of *Pseudomonas* spp. have perplexed scientists for decades, but it is now clear that some (or maybe most) of the colonies with these characteristics have mutations in the *gacA* or *apdA* (=*lemA*) genes. GacA- or ApdA- mutants typically are deficient in extracellular protease production or tryptophan side chain oxidase activity whereas the wild type Pf-5 produces these enzymes. Therefore, we recommend that you select a colony that produces these enzymes to store as a stock culture for future experiments in your laboratory. References listed below provide information on the *gacA* and *apdA* genes and methods for assessing phenotypes described herein.

1. Corbell and Loper. J. Bacteriol. 177: 6230-6236, 1995.
2. Duffy and Defago. Phytopathology 85: 1146, 1995.
3. Gaffney et al. Molec. Plant-Microbe Interact. 7: 455-463, 1994.
4. LaVille et al. PNAS 89: 1562-1566, 1992.

Purified genomic DNA of this strain is available as ATCC® BAA-477D-5 and BAA-477D.

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 protegens* Ramette et al. (ATCC BAA-477)

References

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

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