

Microbialtec Utilized Two Methods to Achieve Pseudomonas Aeruginosa Genome Editing

New York City, New York Apr 1, 2023 ([IssueWire.com](https://www.issuewire.com)) - Microbialtec, the division of Creative Biogene, is dedicated to providing complete microbial solutions that cover all stages from microbial sample collection to detection and analysis. With an overall microbiological research program including sample collection, preservation methods, preliminary experiments and effect evaluation, experiments, and data analysis, the Microbialtec team is skilled in supporting research in molecular biology, medicine, bioinformatics, and statistical ecology. Recently, Microbialtec announced the release of its [pseudomonas aeruginosa genome editing](#) to support biomedicine research.

Rapid and efficient genome editing tools will greatly benefit basic physiological and applied research on Pseudomonas. Pseudomonas aeruginosa has important application value in the fields of biomedicine, ecology, and industry. Silencing and point mutations in Pseudomonas aeruginosa contribute to [bacterial physiology](#), metabolic engineering studies, and drug target discovery. Microbialtec uses two approaches to achieve genome editing in pseudomonas aeruginosa, including Rec-based pseudomonas aeruginosa genome editing and CRISPR/Cas9-based pseudomonas aeruginosa genome editing.

The specific content of pseudomonas aeruginosa genome editing services provided by Microbialtec including: pseudomonas aeruginosa gene knockout, pseudomonas aeruginosa gene knock-in, pseudomonas aeruginosa gene activation and repression, and pseudomonas aeruginosa genetic point mutation.

Microbial genome editing based on homologous recombination uses its own Rec system to perform homologous recombination on exogenous DNA to achieve allelic replacement of the target gene and recombination of genetic information between two homologous DNA strands. These are injected into monocytes by generating and isolating DNA fragments with a genomic sequence similar to the portion of the genome to be edited. Once these fragments are inside the cell, they can recombine with the cell's DNA to replace targeted parts of the genome.

Microorganisms in nature always employ various protective mechanisms that allow them to coexist with harsh environments and invasive nucleic acids. Many microorganisms can resist nucleic acid invasion through specific methods based on gene sequence. CRISPR/Cas9 is one such protective mechanism and the most widely used genome editing technique. Microbialtec provides CRISPR/Cas9 methods for microbial genome editing services (including gene knockout, site-directed mutation, site-directed insertion of foreign sequences, etc.).

"We are committed to providing you with the best genome editing services, including knockouts, knock-ins, and mutations," said Marcia Brady, the marketing director of Creative Biogene, she also added, "We have excellent microbiology experts, a complete gene editing platform, and professional bioinformatics analysis to provide you with a one-stop service for genome editing of Pseudomonas aeruginosa."

About Microbialtec

As a division of Creative Biogene, the Microbialtec platform has an experienced technical team involving molecular biology, medicine, bioinformatics, and statistical ecology. With 10 years of front-line scientific research experience, Creative Biogene supports customers with an overall microbiological research

program and is capable to satisfy customized needs at affordable prices.

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