

Caution: For Research Use. This product is intended for animal research only and not for use in humans. Not for human or animal therapeutic or diagnostic use.

## *Pseudomonas aeruginosa* *P. aeruginosa* ATCC 19660 (Xen5)

Product No.: 119228

**Material Provided:** 1 Agar Plate

**Storage Conditions:** -80°C

### In vitro Characteristics

#### Genetic Characteristics

*Pseudomonas aeruginosa* Xen 5 was derived from the parental strain *P. aeruginosa* ATCC 19660, a mucoid clinical strain isolated from human septicemia in Lima, Peru. *P. aeruginosa* Xen 5 was engineered through conjugation and transposition of plasmid carrying transposon Tn5 *luxCDABE*. *P. aeruginosa* Xen5 possesses a single stable copy of the *P. luminescens lux* operon on the bacterial chromosome.

#### Growth Characteristics

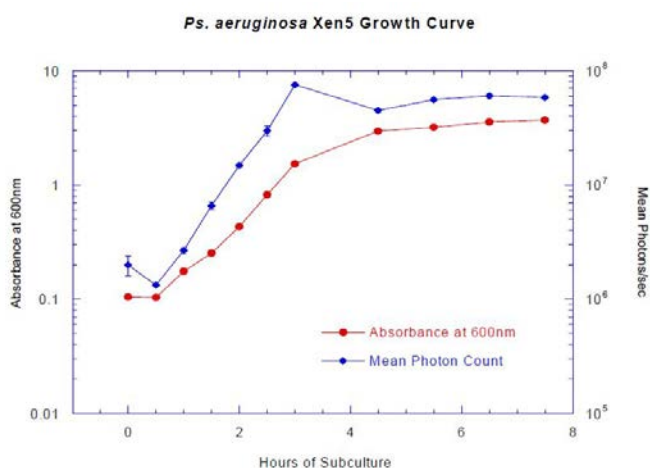
*P. aeruginosa* Xen 5 grows well in various media including Luria Bertani (LB), Nutrient Broth (NB) and Brain Heart Infusion (BHI) without antibiotic selection at 37°C under ambient aeration. Alternatively, *P. Aeruginosa* Xen 5 may be grown selectively in medium/agar containing 60 µg/ml tetracycline to prevent contamination.

#### Colonial Morphology

On agar plates, *P. aeruginosa* Xen 5 appears as large (3-5mm), yellow-green, irregularly round, mucoid colonies with butyrous centers after 24 hours incubation at 37°C.

#### Growth Curve

*P. aeruginosa* Xen 5 displays peak bioluminescence during log-phase growth, which can be achieved after 1.5 hours of subculture in LB broth at 37°C with aeration at 200rpm. An absorbance measurement at 600 nm (against a LB blank) of 1.0 is roughly equivalent to  $7.5 \times 10^8$  cfu/ml of *P. aeruginosa* Xen 5.



## Biochemical Profile

A biochemical profile was obtained for *P. aeruginosa* Xen 5 using the api 20NE system available from bioMérieux.

Assimilation		Other Tests	
Glucose	+	Nitrate Reduction	NO <sub>2</sub>
Arabinose	-	Indole Production	-
Mannose	-	Glucose Ferment	-
Mannitol	+	Arginine Dihydrolase	+
N-acetyl-glucosamine	+	Urease	+
Maltose	-	β-glucosidase	+
Gluconate	+	Protease (gelatin)	+
Caprate	+	β-galactosidase	-
Adipate	+	Oxidase	+
Malate	+		
Citrate	+		
Phenyl-acetate	-		

## Antibiotic Susceptibility

**Disk Diffusion Data:** Disk diffusion tests were performed according to methods outlined in the NCCLS Approved Standard M2-A7.

Kirby-Bauer Disk Diffusion Test	
Sensitive to:	Resistant to:
	Carbenicillin 100
	Chloramphenicol 30 (intermediate)
	Tetracycline 30
	Trimethoprim/sulfamethoxazole

## MIC and MBC Data

MIC and MBC were determined using the macro-dilution methods specified in the NCCLS Approved Standard M7-A5.

NCCLS Macrodilution MIC/MBC		
Antibiotic	MIC (μg/mL)	MBC (μg/mL)
Ceftriaxone	31.25	125
Gentamicin	1.0	1.0
Tetracycline	>125	>125

## References

1. Infection & Immunity, Feb. 2003, Vol. 71, No. 2, 882-890
2. Infection & Immunity, July 2005, pp. 3878-3887
3. Journal of Immunology, 2004, 172: 1801-1808
4. Lasers in Surgery and Medicine 2007, 39:59-66
5. Blood, 15 December 2002, Vol. 100, No. 13, 4660-4667
6. Biomaterials. 2006 Aug;27 (22):4157-64
7. Methods in Molecular Biology 2008 Vol. 431, 225-239

## Product Information

### Warranty

PerkinElmer warrants that cells will be viable upon shipment from PerkinElmer for a period of thirty days, provided they have been properly stored and handled during this period.

### Disclaimers

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