

## Staphylococcus aureus, S. aureus ATCC 12600 (Xen29)

Product Number: 119240

Material Provided: 1 Agar Plate

Storage Conditions: -80°C

### Genetic Characteristics

*Staphylococcus aureus* Xen29 was derived from the parental strain *S. aureus* 12600, a pleural fluid isolate, which is also designated as NCTC8532. *S. aureus* Xen29 possesses a stable copy of the modified *Photorhabdus luminescens luxABCDE* operon at a single integration site on the bacterial chromosome.

### Growth Characteristics

*S. aureus* Xen29 grows well in various media including Luria Bertani (LB), Brain Heart Infusion (BHI), and Nutrient Broth (NB) at 37°C under ambient aeration. *S. aureus* Xen 29 may also be grown selectively on medium containing 200 µg/ml kanamycin.

### Colonial Morphology

On LB agar, *S. aureus* Xen29 appears as small (~1.5mm), cream-colored, opaque, smooth, circular colonies.

### Growth Curve

Log-phase growth can be achieved after 2 to 3 hours of subculture in LB broth at 37°C, shaking at 200rpm. An absorbance measurement at 600nm (against a LB blank) of 0.5 is roughly equivalent to  $1.44 \times 10^8$  cfu/ml of *S. aureus* Xen 29.

### Virulence Factors

Hemolysis:  $\alpha$ -hemolysis on TSA + 5% sheep blood

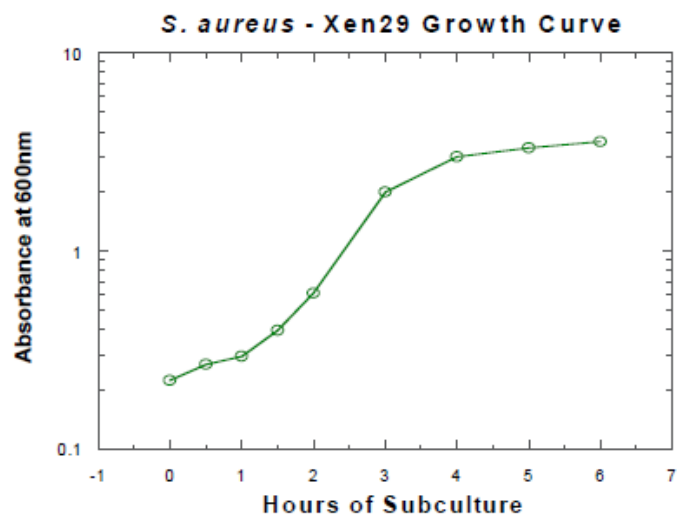
Capsule: Serotype 3 (NCTC type strain).

DNase: Positive.

NaCl: Tolerant via growth on Mannitol Salts Agar.

Coagulase: Positive in 24hrs.

mecA: negative



## Biochemical Profile

A biochemical profile was obtained for *S. aureus* Xen 29 using the api 20 STAPH system available from bioMérieux.

Sugar Utilization	
D-Glucose	+
D-Fructose	+
D-Mannose	+
Maltose	+
Lactose	+
Trehalose	+
D-Mannitol	+
Xylitol	-
Raffinose	-
Xylose	-
D-Melibiose	+
Sucrose	+

Other Tests	
Nitrate Reduction	+
Alkaline Phosphatase	+
Voges Proskauer	-
□- methyl-D-glucoside	-
N-acetyl-glucosamine	+
Arginine dihydrolase	+
Urease	+

## 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	Kanamycin
Gentamicin 20	
Penicillin G 10U	
Vancomycin 30	

## MIC and MBC Data

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

NCCLS Macrodilution MIC/MBC		
Antibiotic	MIC (µg/mL)	MBC (µg/mL)
Ceftriaxone	8.0	32
Ciprofloxacin	4.0	8.0
Erythromycin	2.0	>16*
Gentamicin	R up to 16	n/a
Penicillin G	0.125	0.25
Tetracycline	0.5	>16

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