

*Serratia marcescens*

(2005/3/1 2004/12/11 )

*S. marcescens*

.API20E

/ 40 45  
*S. marcescens* . / 100  
 45  
 %94-40  
 / 40  
 %92-10  
 %93-10  
 . / 100

### **Curing of *Serratia marcescens* Plasmid by High Temperature and by Acridine Orange and Urea**

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**ABSTRACT**

The present study was conducted on five isolates of *S. marcescens* from septicemic patients in Al-Salam Hospital in Mosul. Isolates were identified by using cultural and biochemical characteristics as well as the Api 20E system Resistance of the isolates to Chloramphenicol, Tetracycline, Ampicillin, Erythromycin and Gentamycin

was checked. Curing the Isolates of their plasmids was performed by using high temperature (45°C), acridine orange (40 µg/ml) and urea (100 µg/ml). When *S. marcescens* isolates were grown at 45°C cured and sensitive bacterial colonies were observed at a frequency of 10–94%. These, however, were resistant to Erythromycin. Treating the isolates with Acridine orange cured them of all their resistance except Erythromycin at 10–92%. Urea treatment cured them of all resistance phenotypes except Ampicillin and Chloramphenicol, also at a frequency of 10–93%.

*Serratia marcescens*

.(John and McNeill, 1981)

Carbapenems

*S. marcescens*

β-metalloenzymes

β-lactam

(Queenan, et al., 2000)

IMP-1

*S. marcescens*

Cephalosporins

β lactamase

*Serratia*

.(Goulet and Pieard, 1977)

R

.(Richmond, 1972)

DNA

Sodium Dodesyl Sulphate

.(Mickelsen et al., 1985)

*Serratia marcescens*

45

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:

*Serratia marcescens*

.(Atlas, 1997)

API20E

:

.(Quinn et al ., 1999)

:

Amp 50

Tc 15

Cm 10

/

Gm 10

E 15

.(Rasool et al ., 2003)

:

*Serratia marcescens*

5

0.1

. 37

24

10

0.1

(Motallebi et al., 2000)

24

45

10

5

.

24

37

0.1

100

.

24

37

.

24

37

:

*S. marcescens*

5 (Grindley et al.,1970)

10 7 37 *S. marcescens*

0.1 / 40

24 37 5

0.1 ( )

100 . 24 37

24 37

5 (Tomoeda et al ., 1970)

0.1 . 24 37 *S. marcescens*

/ 100 5

24 37

0.1

24 37

100

24 37

:

*Serratia*

API20E

*. marcescens*

.....

:

(1)

*Serratia marcescens*

:1

( / )					
G 10	E 15	Amp 50	Tc 15	Cm 10	
R	R	R	R	S	1
R	S	R	R	S	2
R	R	R	R	R	3
R	R	R	S	R	4
R	R	R	S	R	5

: R

: S

(1)

:

37

42

(2)

45

47

*Serratia marcescens*

:2

. 45

. 45 ( / )					
G 10	E 15	Amp 50	Tc 15	Cm 10	
94	R	R	43	S	1
85	S	40	40	S	2
73	R	80	46	70	3
R	R	R	S	82	4
R	R	R	S	R	5

: R

: S

: \*

(2)

(Mustafa, 2002)

*Proteus mirabilis*

G Amp Tc Cm

37

(2001 )

*Staph. aureus*

Amp Tc Cm

45

R

DNA- Protein-Protein

Protein

.(Sherburne et al., 2000)

:

/ 40

.(3)

.....

*Serratia marcescens*

:3

. / 40

( / )					
G 10	E 15	Amp 50	Tc 15	Cm 10	
R	R	R	30	S	1
40	S	72	38	S	2
68	R	78	12	R	3
R	R	R	S	12	4
83	R	92	S	10	5

: R

: S

: \*

(3)

(Mustafa, 2002)

*Serratia*

(Traub et al., 1976)

*marcescens*

(King, 1977)

DNA

:

(4)

*Serratia marcescens*

*Serratia marcescens*

:4

( / )					
G 10	E 15	Amp 50	Tc 15	Cm 10	
R	70	R	R	S	1
R	S	R	22	S	2
10	93	R	18	R	3
18	R	R	S	R	4
28	R	R	S	R	5

(4)

*P. mirabilis*

(Mustafa, 2002)

(Mustafa ,2002)

DNA

.(Tomoeda et al., 1970 )

)

.(2001

*Staphylococcus aureus*

.2002

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