



Klebsiella oxytoca

Klebsiella oxytoca

[LPS] lipopolysaccharide

sepharose CL 6B 200

% 0.06

% 26.6

/ 3.16 X10⁶

LD50

/ 266

LD50

EXTRACTION AND PARTIAL PURIFICATION OF LIPOPOLYSACCHARIDE FROM *KLEBSIELLA OXYTOCA* AND STUDY OF ITS ROLE IN THE PATHOGENICITY

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Abstract

K.oxytoca bacteria was isolated from patients with urinary tract infection [UTI] from both sexes and at different ages and were identified by biochemical tests .the isolates were sensitive to Amikicin Nitrofurantion and Ticarcillin \Clavulinic acid and resistant to β -lactam antibiotics The isolate that gave highest percentage of resistant to antibiotics was used for LPS extraction by phenol-hot water method. LPS partial purification by gel filtration on Sepharose Cl-6B-200 showed that the percentage of carbohydrate in the partially purified LPS was 26.6% and percentage of binding protein was 0.06% and no nucleic acid was found. The LD50 of the bacteria and LPS was determined by injection of the male mice, it was 3.16X 10⁶ cfu for bacteria and 266 μ g/ml for LPS.

tryptophan

.[1] ornithine decarboxylase

K. oxytoca

[Oppertunistic]

المقدمة

Klebsiella oxytoca

Enterobacteriaceae

K. pneumoniae

-

[Nosocomial infection]
 % 8 *Klebsiella* spp.
 [2.3]

\ 3000 [Cooling centrifuge] 30
 \ 3000 10
 0.5 [mucosa surface]
 . 18 % LPS
 \ 3000
 10
 20gm : *K. oxytoca*
 LPS
 : LPS LPS
 [4] LPS [Lipid A] A
 .[4]

0.05 7.0
 0.05 EDTA
 0.1gm Lysozyme 10:1
 5gm
 18 4
 37
 :
 :
 [MacConkey agar]

\ 1 RNase DNase [5]
 37
 . 60
 [6] :
 [4] :
 :
 70 . 10
 70 % 90 :
 3 [4]
 250 ml
 . 100ml
 70 1ml 15 121
 \ 10000
 . 18 37
 \ 100 18 37

280 .1

LPS .2

Sepharose-6B Vortex

[8]

260 3. قياس

[9]

[10]

[8] -

[11] : **Sepharose-CI-6B-200**

[4] Sepharose-CI-6B-200

[LD50] 0.025

: 7.2

1ml .[Vaccum pump]

\ [10⁸, 10⁷, 10⁶, 10⁵] [20x2.5 cm]

[Intraperitoneal]

98.125

0.025 . cm³

[12] 7.2

[LD50] [Void volum] . \ 60

: \ 5

[Fraction tube] 3ml

3ml

600

[350, 300, 250, 200] 0.025

1\ 7.2

1ml

1ml

15 :

[12] 3\

[7]

\ 5

:

Klebsiella spp [5]

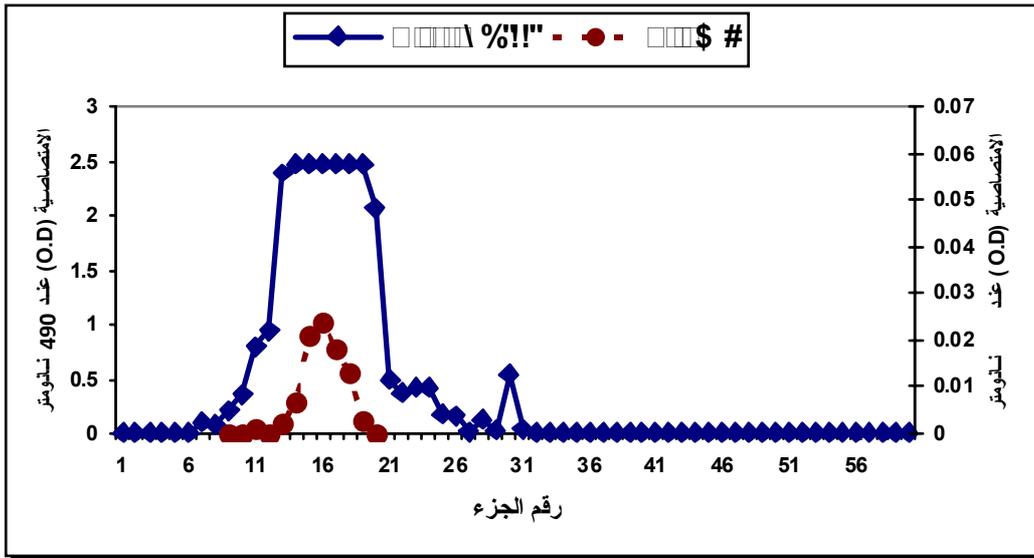
:

Klebsiella

.[13, 1, 2]

| <i>klebsiella</i> | | | [] |
|---------------------------|------------------------|--------------------------------------|-------------------------------|
| <i>K. ornithinolytica</i> | <i>K. pneumoniae</i> | <i>K. oxytoca</i> | الاختبارات البايوكيميائية |
| مخمرة لسكر اللاكتوز | مخمرة لسكر اللاكتوز | مخمرة لسكر اللاكتوز | النمو على وسط الماكونكي الصلب |
| سالبة لصبغة غرام | سالبة لصبغة غرام | سالبة لصبغة غرام | Gram stain |
| - | - | - | Oxidase |
| + | + | + | Catalase |
| + | - | + | Indole |
| - | + | - | MR |
| + | + | + | VP |
| + | + | + | Citrate |
| A/A-+ | A/A-+ | A/A-+ | KIA |
| - | - | - | Motility |
| + | + | + | Urease |
| + | + | + | Gas form lactose |
| + | - | - | Ornithine decarboxylase |
| - | - | + | Acetate utilization |
| - | - | + | Gelatine liguification |
| + | - | + | Growth at 10 C |
| + | + | + | Glucose |
| + | + | + | Inositole |
| + | + | + | Lactose |
| + | + | + | <i>Cellibiose</i> |
| [A] | [A] | [-] | [+] |
| EDTA | Lysozyme | استخلاص عديد السكريد الشحمي 20 gm | |
| LPS | LPS | Ko38 | <i>K. oxytoca</i> |
| [4, 15] | 12.4-1.7 | LPS | . |
| % 32 | EDTA | Tris | . |
| EDTA | Tris | Lysozyme | 120 rpm |
| [16] | LPS | % 86 | . |
| LPS | LPS | 18 | 37 |
| LPS | [17] | LPS | [14] |
| % 7.8 | LPS | LPS | . |
| % 1.3 | LPS | LPS | [4] |

[8] 490nm [18, 19] LPS
 [1] *Bradyrhizobium japonicum*
 LPS
 280nm *Brucella abortus*
 .[4, 17, 15] LPS *B.japonicum*
 Ko38 LPS
 [10] N- and O-acetylated -6-deoxyhexose
 % 0.06 O
 % 1.3 LPS [19] LPS
 LPS [18] []
 LPS % 0.5 % 1 LPS
K.pneumoniae [hydrophilic bond]
 [22] HPLC LPS [20] O
 [14,17] % 6 LPS
 [23] % 4.3 % 5.8 LPS % 0.06
 LPS % 6.8
 LPS [21] *Campylobacter jejuni*
 [8]
 %26.6 Sepharose-C1-6B- 20
 % 7.8 5 / 60
 .LPS LPS 280nm



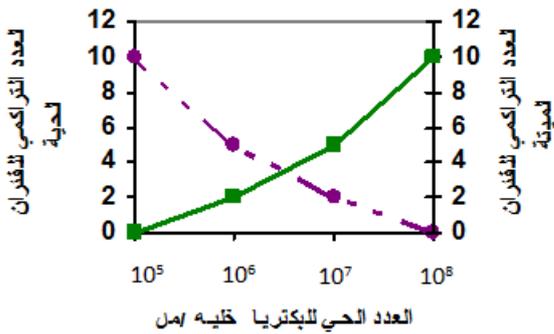
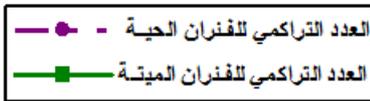
Sepharose-CI-6B-200 *K.oxytoca* :1
 5 / 60 7.2 0.025 [20X2.5]cm.

% 100
 % 50 1/ 266

[3] LD50 [LD50]

/ LPS

K.oxytoca LD50
 %



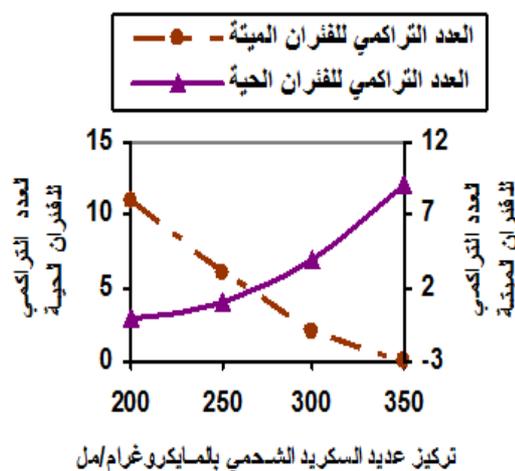
K. oxytoca LD50 [2]

100%
 50% / 10⁸
 [2] / 3.18X10⁶
 (2) *K.oxytoca* LD50

LD50

LD50
 LPS LPS
 1/ [350, 300, 250, 200]
 1/ 350

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