

(1. 100083)
(2. 150018)

: , 20
, ,
, A03 I06 ,
, ; ,
Caco-2 ,
,
: , , ,

Adherence Properties of Strains and Their Antagonistic Activity Against Enteropathogens

LIU Guo-Rong¹ PAN Wei-Hao¹ CHANG Xiao-Yuan¹ LIN Feng-Xiang² LI Ping-Lan^{1*}

(1. Key Laboratory of Functional Dairy Ministry of Education of the People's Republic of China, College of Food Science and Nutritional Engineering, China Agricultural University, Beijing 100083, China)
(2. Haerbin Meihua Shengwu Technology Co. LTD, Haerbin, Heilongjiang 150018, China)

Abstract: Twenty bifidobacterial strains were tested for adherence ability with cellular model systems *in vitro*. Strain A03 and I06 showed high adherence to the epithelial cells. The inhibitory effects of Strain A03 and I06 on enteropathogen *Staphylococcus aureus* and *Escherichia coli* were demonstrated by simultaneous incubation and antimicrobial testing. These antibacterial activities were mainly induced by organic acids produced by bifidobacteria. The release of LDH of Caco-2 cells which were differently treated with bifidobacteria and enteropathogen, suggested that the adherence of bifidobacteria were essentially different with

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* Tel: 86-10-62737664; ✉ lipinglan420@126.com
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(Forma scientific), TGL-16C (), pHS-25 (), 722S (), ()

1.2

1.2.1 :
Hidalgo J ^[4]

1.2.2 : 24 h
10⁸ CFU/mL, 0.4 mL
10 mL, pH 7.0 MRS , 37°C
36 h, 12 h ,

[1-3] **1.2.3**
^[5,6]: 1)
20 : 8000 r/min 10 min
2)
2.5 mol/L NaOH ,
pH 6.5~7.0,
3)
1.1 : 80°C 10 min
1.1.1 : : 20
1 : , *Staphy-*
lococcus aureu ATCC 6538, ATCC ;
, *Escherichia coli* CMCC(B)44102,
1.1.2 : Caco-2 , 2 h, 8000 r/min 10 min,
ATCC HTB-37, (LDH)
1.1.3 : MRS
; LB
1.1.4 : MEM Caco-2 **2**
, Gibco (**2.1**
) ; (0.25% , 0.03% EDTA, pH
7.6~8.0); pH 7.4 PBS Caco-2 ,
1.1.5 : (LDH) , 20
1 ,
1.1.6 : (10 mm×7.8 mm×6 mm) ,

SPSS11.5

ed

12 h ,

; 24 h

h , I06 A03

$3.78 \pm 0.00 \log \text{ CFU/mL}$

U/mL,

,

in monocultures and co-cultures

2TETount

24 h 36 h ,
 , I06
 , 36 h ,
 4.48±0.00 log CFU/mL,
 , A03 I06

2.3

A03
 I06
 (4 5) A03 I06

4
 Table 4 Inhibitory activity after different treatment
 with as indicator bacterium

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( )

: d; h; min; s

: mol/L, M ( ) N ( )

: r/min, rpm

: Pa kPa MPa

: OD( )

: D kD, bp kb

: , : t(h) (

, ) : (°C % ), :

20 cm× 0.3 cm,

20× 0.3 cm; 3°C~5°C

3~5°C; 3%~6%

3~6%