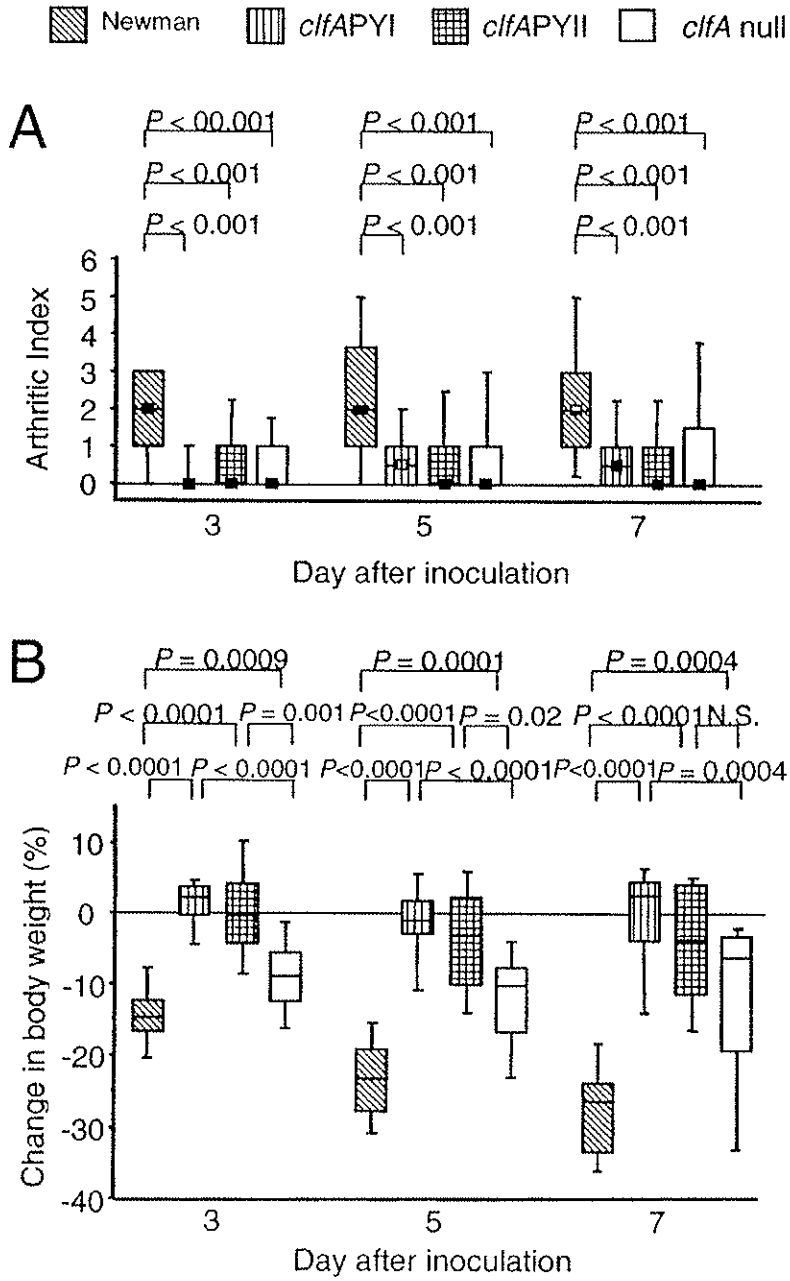

Newman
clfAPYI
clfAPYII
clfA null
A
P < 00.001
P < 0.001
P < 0.001
P < 0.001
P < 0.001
P < 0.001
P < 0.001
P < 0.001
P < 0.001
Arthritic Index
6
5
4
3
2
1
0
3
5
7
Day after inoculation
B
P = 0.0009
P = 0.0001
P = 0.0004
P < 0.0001
P = 0.001
P<0.0001
P = 0.02
P < 0.0001
N.S.
P < 0.0001
P < 0.0001
P<0.0001
P < 0.0001
P<0.0001
P = 0.0004
Change in body weight (%)
10
0
-10
-20
-30
-40
3
5
7
Day after inoculation

Fig. 1

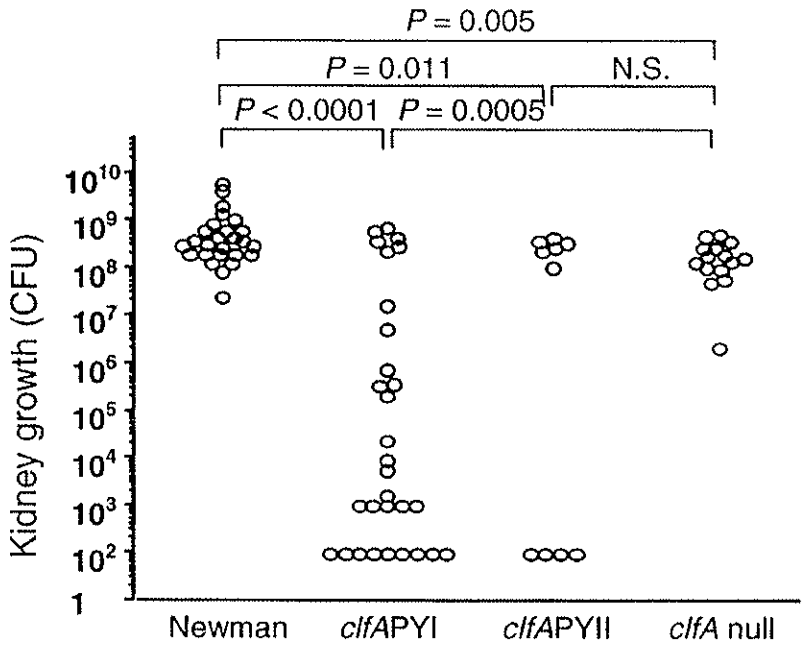

P = 0.005
P = 0.011
N.S.
P < 0.0001
P = 0.0005
Kidney growth (CFU)
10^10
10^9
10^8
10^7
10^6
10^5
10^4
10^3
10^2
1
Newman
clfAPYI
clfAPYII
clfA null

Fig. 2

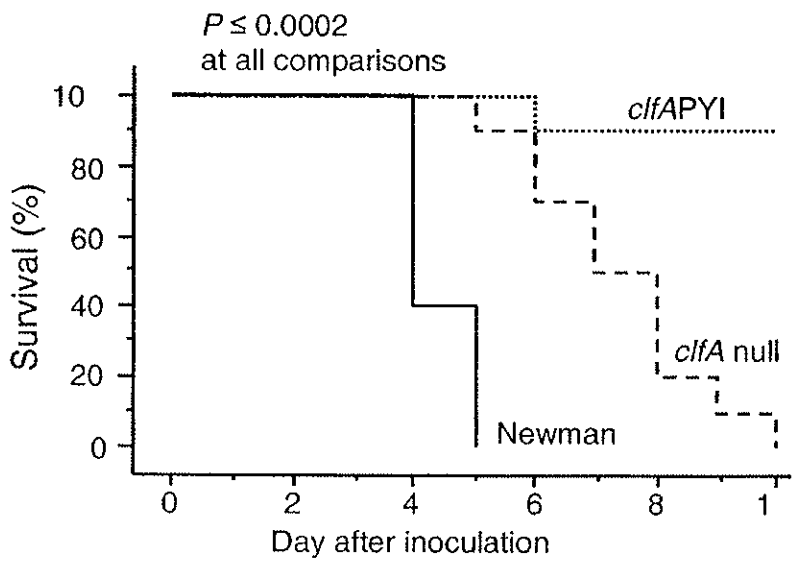

P ≤ 0.0002
at all comparisons
clfAPYI
clfA null
Newman
Survival (%)
10
80
60
40
20
0
0
2
4
6
8
1
Day after inoculation

Fig. 3

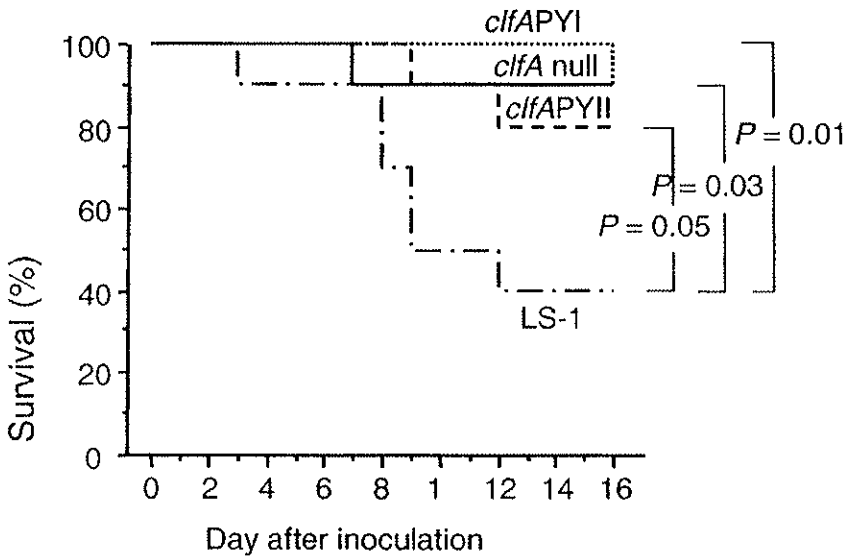

clfAPYI
clfA null
clfAPYII
LS-1
P = 0.01
P = 0.03
P = 0.05
Survival (%)
100
80
60
40
20
0
0 2 4 6 8 1 12 14 16
Day after inoculation

Fig. 4

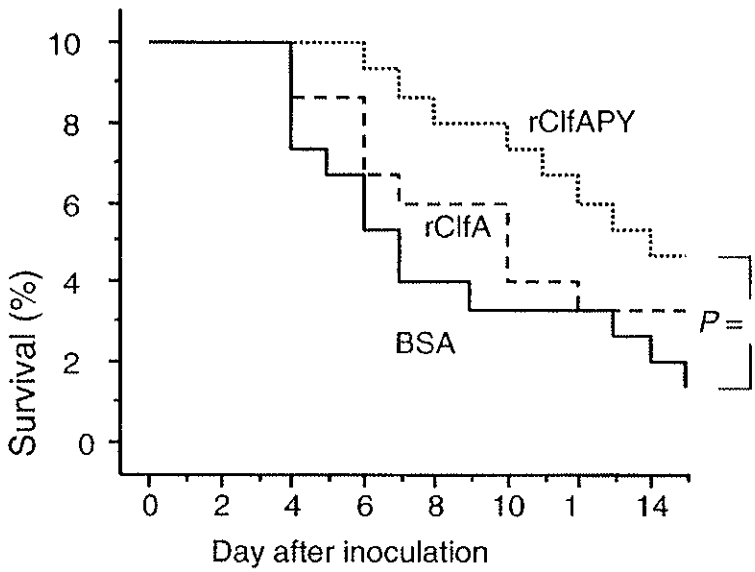

10
8
6
4
2
0
Survival (%)
rClfAPY
rClfA
BSA
P =
0
2
4
6
8
10
1
14
Day after inoculation

Fig. 5

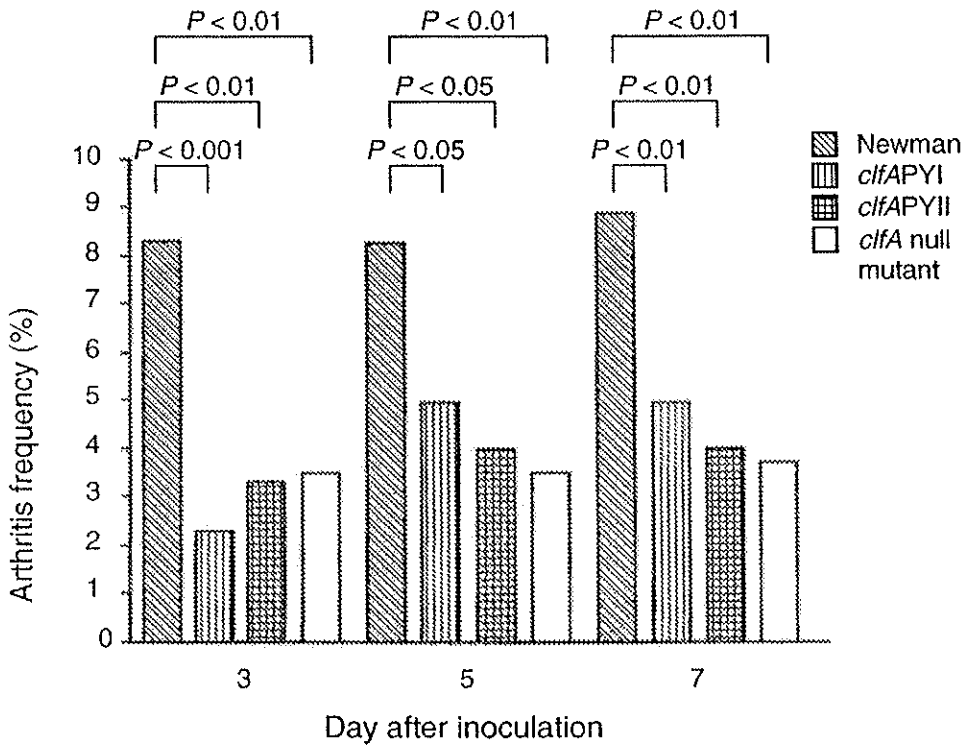

P < 0.01
P < 0.01
P < 0.001
P < 0.01
P < 0.05
P < 0.05
P < 0.01
P < 0.01
P < 0.01
Newman
clfAPYI
clfAPYII
clfA null mutant
Arthritis frequency (%)
0
1
2
3
4
5
6
7
8
9
10
3
5
7
Day after inoculation

Fig. 6

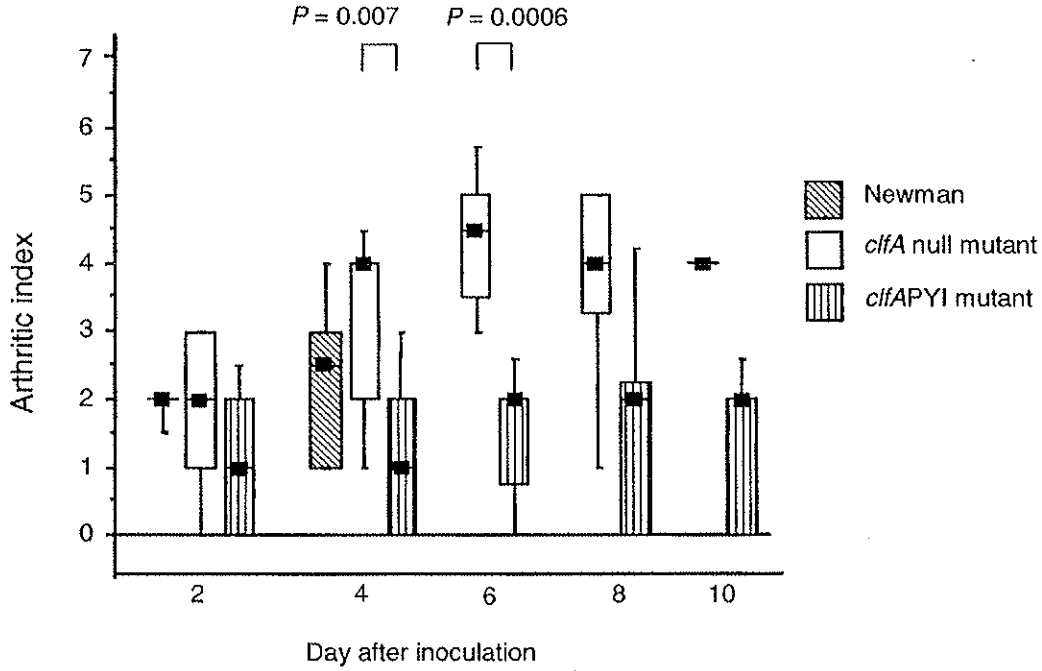

P = 0.007
P = 0.0006
Arthritic index
0
1
2
3
4
5
6
7
2
4
6
8
10
Day after inoculation
Newman
clfA null mutant
clfAPYI mutant

Fig. 7

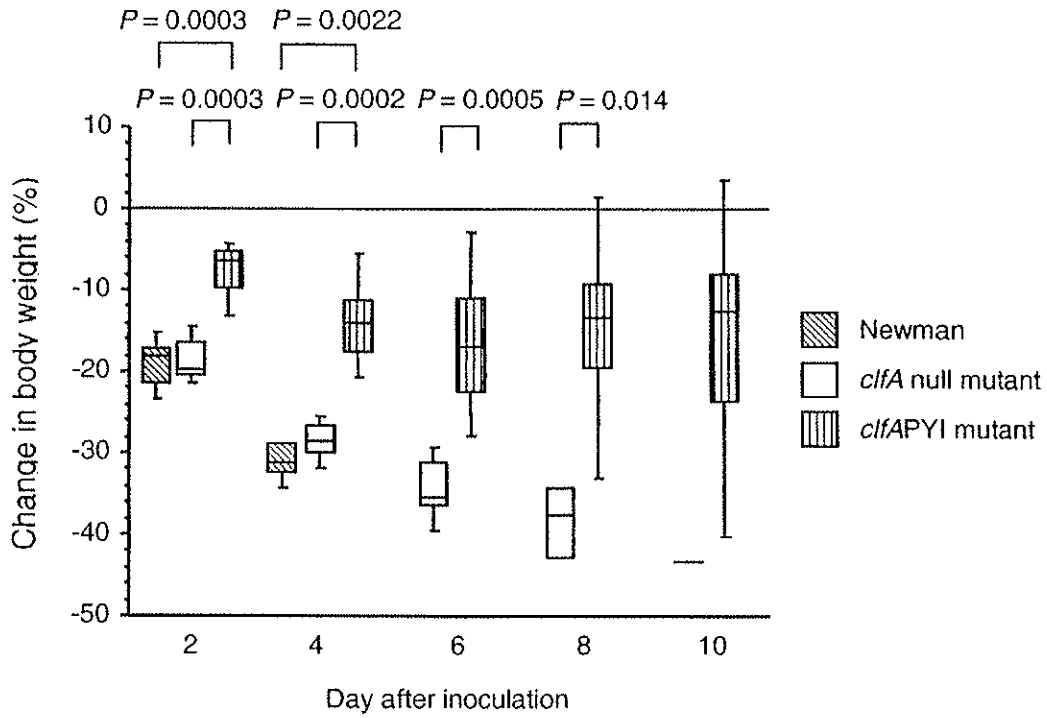

P = 0.0003
P = 0.0022
P = 0.0003
P = 0.0002
P = 0.0005
P = 0.014
10
0
-10
-20
-30
-40
-50
Change in body weight (%)
2
4
6
8
10
Day after inoculation
Newman
clfA null mutant
clfAPYI mutant

Fig. 8

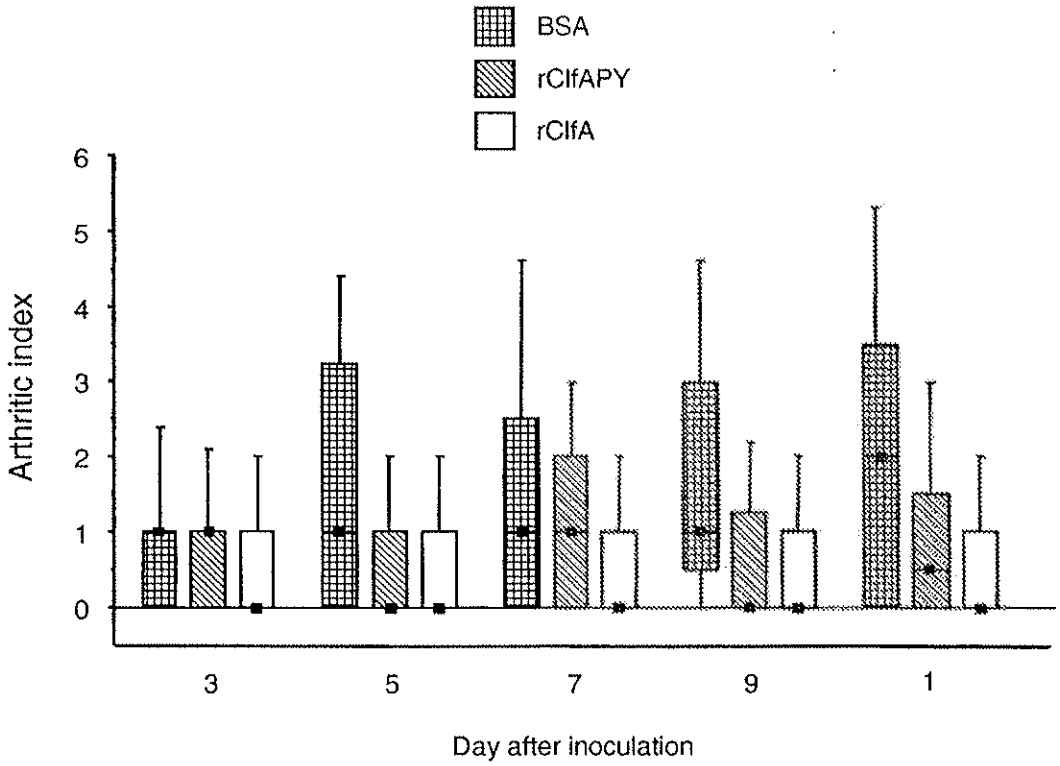

BSA
rClfAPY
rClfA
Arthritic index
6
5
4
3
2
1
0
3
5
7
9
1
Day after inoculation

Fig. 9

wild-type ClfA A (N123) domain protein (rClfA)

```
agtgaaaatagtgttacgcaatctgatagcgcaagtaacgaaagcaaaagtaatgattcaagt
 S  E  N  S  V  T  Q  S  D  S  A  S  N  E  S  K  S  N  D  S  S
agcgttagtgctgcacctaaaacagacgacacaaacgtgagtgatactaaaacatcgtca
 S  V  S  A  A  P  K  T  D  D  T  N  V  S  D  T  K  T  S  S
aacactaataatggcgaaacgagtgtggcgcaaaatccagcacaacaggaaacgacacaa
 N  T  N  N  G  E  T  S  V  A  Q  N  P  A  Q  Q  E  T  T  Q
tcatcatcaacaaatgcaactacggaagaaacgccggtaactggtgaagctactactacg
 S  S  S  T  N  A  T  T  E  E  T  P  V  T  G  E  A  T  T  T
acaacgaatcaagctaatacaccggcaacaactcaatcaagcaatacaaatgcggaggaa
 T  T  N  Q  A  N  T  P  A  T  T  Q  S  S  N  T  N  A  E  E
ttagtgaatcaaacaagtaatgaaacgacttttaatgatactaatacagtatcatctgta
 L  V  N  Q  T  S  N  E  T  T  F  N  D  T  N  T  V  S  S  V
aattcacctcaaaattctacaaatgcggaaaatgtttcaacaacgcaagatacttcaact
 N  S  P  Q  N  S  T  N  A  E  N  V  S  T  T  Q  D  T  S  T
gaagcaacaccttcaaacaatgaatcagctccacagagtacagatgcaagtaataaagat
 E  A  T  P  S  N  N  E  S  A  P  Q  S  T  D  A  S  N  K  D
gtagttaatcaagcggttaatacaagtgcgcctagaatgagagcatttagtttagcggca
 V  V  N  Q  A  V  N  T  S  A  P  R  M  R  A  F  S  L  A  A
gtagctgcagatgcaccggcagctggcacagatattacgaatcagttgacgaatgtgaca
 V  A  A  D  A  P  A  A  G  T  D  I  T  N  Q  L  T  N  V  T
gttggtattgactctggtacgactgtgtatccgcaccaagcaggttatgtcaaactgaat
 V  G  I  D  S  G  T  T  V  Y  P  H  Q  A  G  Y  V  K  L  N
tatggtttttcagtgcctaattctgctgttaaaggtgacacattcaaaataactgtacct
 Y  G  F  S  V  P  N  S  A  V  K  G  D  T  F  K  I  T  V  P
aaagaattaaacttaaatggtgtaacttcaactgctaaagtgccaccaattatggctgga
 K  E  L  N  L  N  G  V  T  S  T  A  K  V  P  P  I  M  A  G
gatcaagtattggcaaatggtgtaatcgatagtgatggtaatgttatttatacatttaca
 D  Q  V  L  A  N  G  V  I  D  S  D  G  N  V  I  Y  T  F  T
gactatgtaaatactaaagatgatgtaaaagcaactttgaccatgcccgcttatattgac
 D  Y  V  N  T  K  D  D  V  K  A  T  L  T  M  [redacted]  A  [redacted]  I  D
cctgaaaatgttaaaaagacaggtaatgtgacattggctactggcataggtagtacaaca
 P  E  N  V  K  K  T  G  N  V  T  L  A  T  G  I  G  S  T  T
gcaaacaaaacagtattagtagattatgaaaaatatggtaagttttataacttatctatt
 A  N  K  T  V  L  V  D  Y  E  K  Y  G  K  F  Y  N  L  S  I
aaaggtacaattgaccaaatcgataaaacaaataatacgtatcgtcagacaatttatgtc
 K  G  T  I  D  Q  I  D  K  T  N  N  T  Y  R  Q  T  I  Y  V
aatccaagtggagataacgttattgcgccggttttaacaggtaatttaaaaccaaatacg
 N  P  S  G  D  N  V  I  A  P  V  L  T  G  N  L  K  P  N  T
gatagtaatgcattaatagatcagcaaaatacaagtattaaagtatataaagtagataat
 D  S  N  A  L  I  D  Q  Q  N  T  S  I  K  V  Y  K  V  D  N
gcagctgatttatctgaaagttactttgtgaatccagaaaactttgaggatgtcactaat
 A  A  D  L  S  E  S  Y  F  V  N  P  E  N  F  E  D  V  T  N
agtgtgaatattacattcccaaatccaaatcaatataaagtagagtttaatacgcctgat
 S  V  N  I  T  F  P  N  P  N  Q  Y  K  V  E  F  N  T  P  D
gatcaaattacaacaccgtatatagtagttgttaatggtcatattgatccgaatagcaaa
 D  Q  I  T  T  P  Y  I  V  V  V  N  G  H  I  D  P  N  S  K
ggtgatttagctttacgttcaactttatatgggtataactcgaatataatttggcgctct
 G  D  L  A  L  R  S  T  L  Y  G  Y  N  S  N  I  I  W  R  S
atgtcatgggacaacgaagtagcatttaataacggatcaggttctggtgacggtatcgat
 M  S  W  D  N  E  V  A  F  N  N  G  S  G  S  G  D  G  I  D
aaaccagttgttcctgaacaacctgatgagcctggtgaaattgaaccaattccagag
 K  P  V  V  P  E  Q  P  D  E  P  G  E  I  E  P  I  P  E
```

Fig. 10

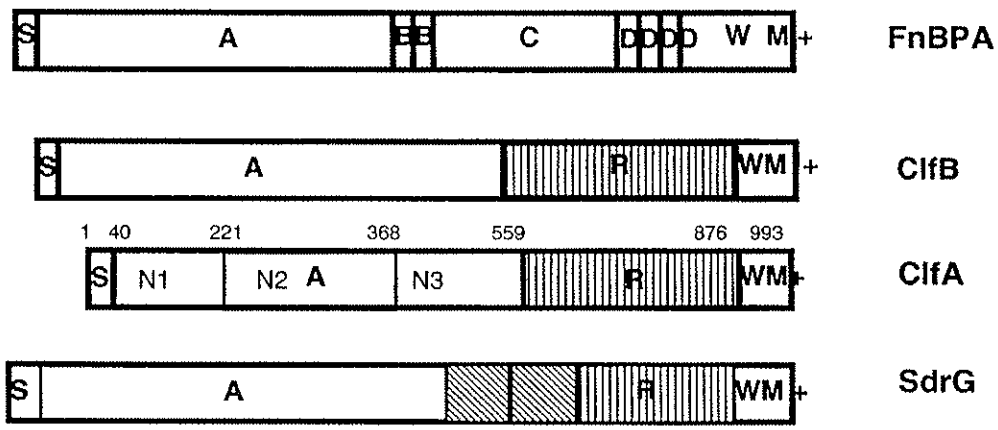

S
A
B
C
D
W
M
+
FnBPA
S
A
R
WM
+
ClfB
1
40
221
368
559
876
993
S
N1
N2
A
N3
R
WM
+
ClfA
S
A
R
WM
+
SdrG

Fig. 11

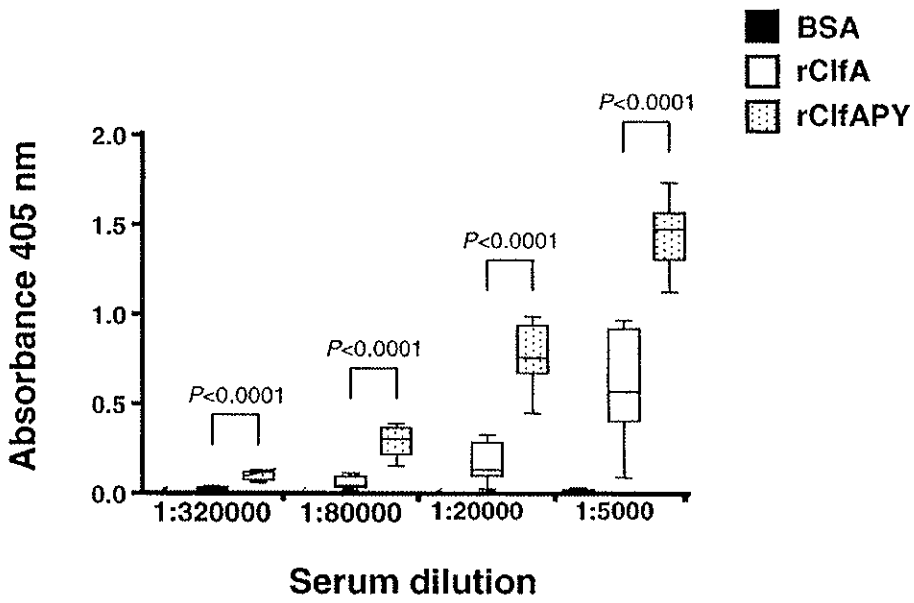

BSA
rClfA
rClfAPY
Absorbance 405 nm
2.0
1.5
1.0
0.5
0.0
P<0.0001
P<0.0001
P<0.0001
P<0.0001
1:320000
1:80000
1:20000
1:5000
Serum dilution

Fig. 12

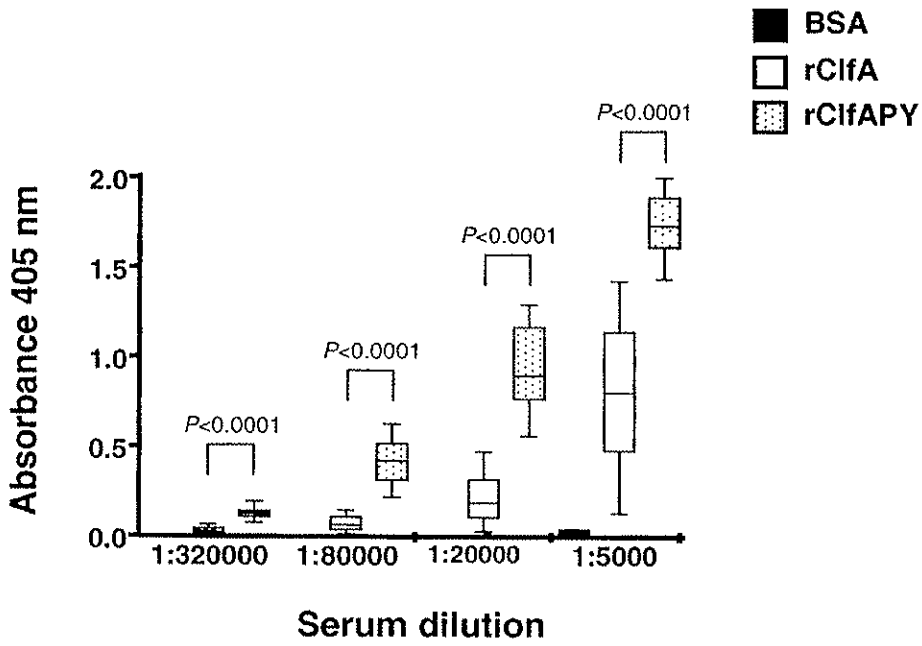

BSA
rClfA
rClfAPY
P<0.0001
P<0.0001
P<0.0001
P<0.0001
Absorbance 405 nm
2.0
1.5
1.0
0.5
0.0
1:320000
1:80000
1:20000
1:5000
Serum dilution

Fig. 13

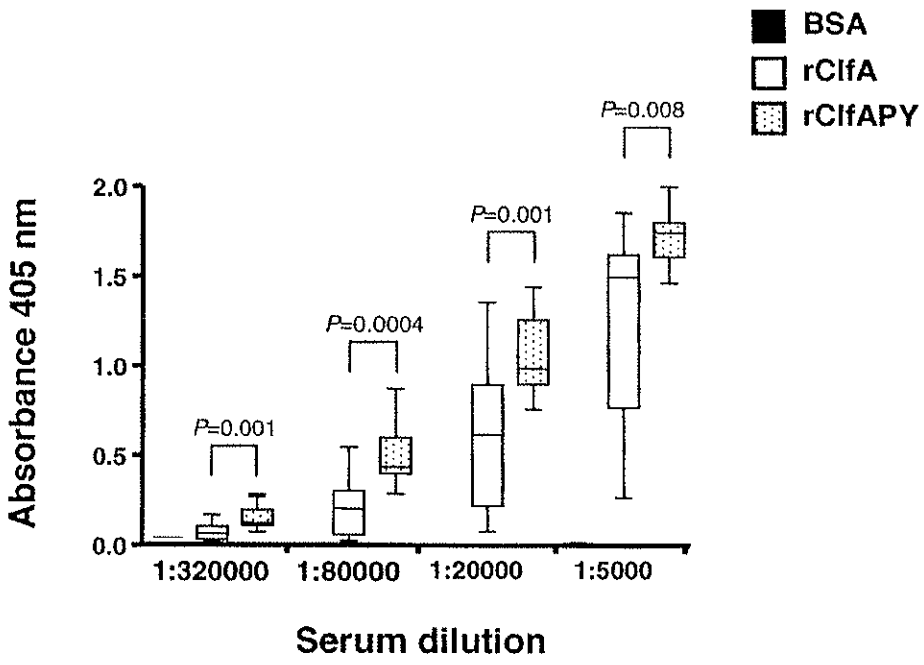

BSA
rClfA
rClfAPY
P=0.008
P=0.001
P=0.0004
P=0.001
Absorbance 405 nm
2.0
1.5
1.0
0.5
0.0
1:320000
1:80000
1:20000
1:5000
Serum dilution

Fig. 14

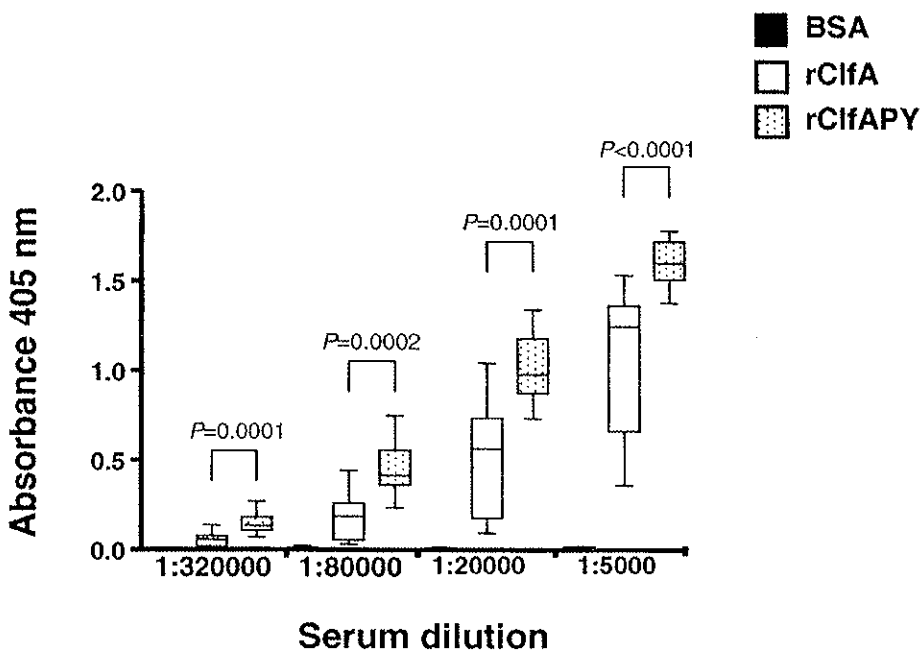

BSA
rClfA
rClfAPY
Absorbance 405 nm
2.0
1.5
1.0
0.5
0.0
P=0.0001
P=0.0002
P=0.0001
P<0.0001
1:320000
1:80000
1:20000
1:5000
Serum dilution

Fig. 15

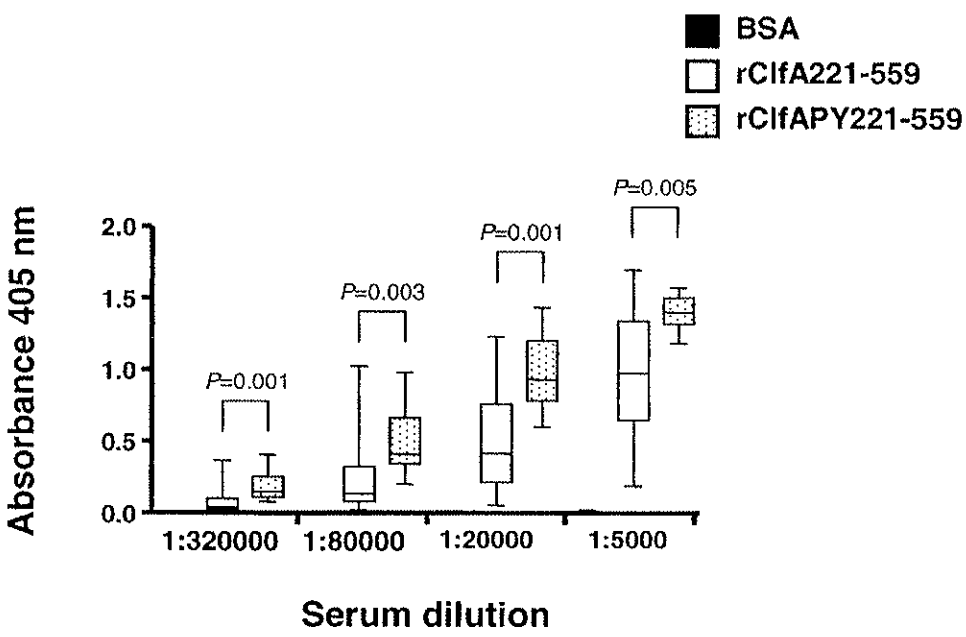

BSA
rClfA221-559
rClfAPY221-559
Absorbance 405 nm
2.0
1.5
1.0
0.5
0.0
P=0.001
P=0.003
P=0.001
P=0.005
1:320000
1:80000
1:20000
1:5000
Serum dilution

Fig. 16

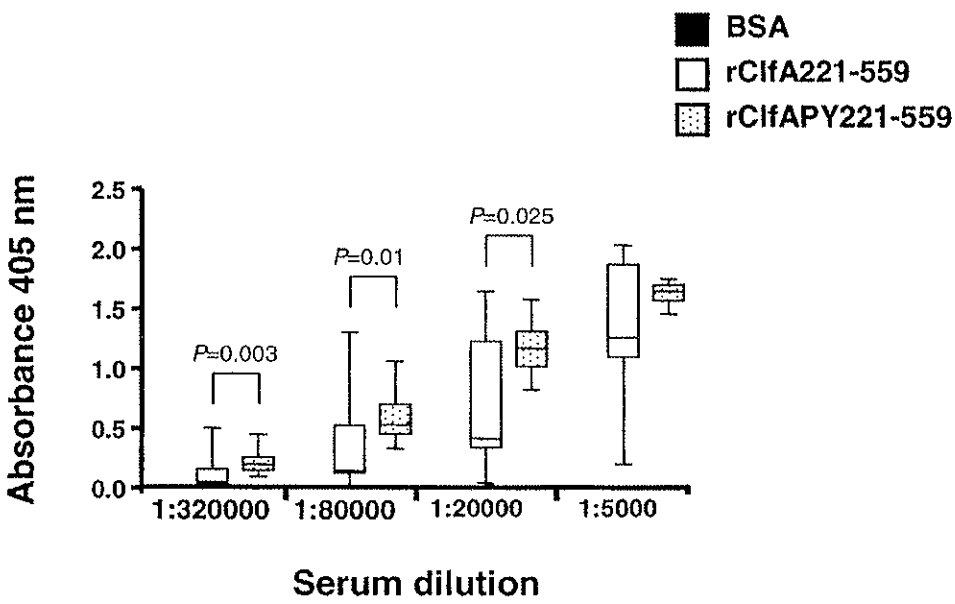

BSA
rClfA221-559
rClfAPY221-559
Absorbance 405 nm
2.5
2.0
1.5
1.0
0.5
0.0
P=0.003
P=0.01
P=0.025
1:320000
1:80000
1:20000
1:5000
Serum dilution

Fig. 17

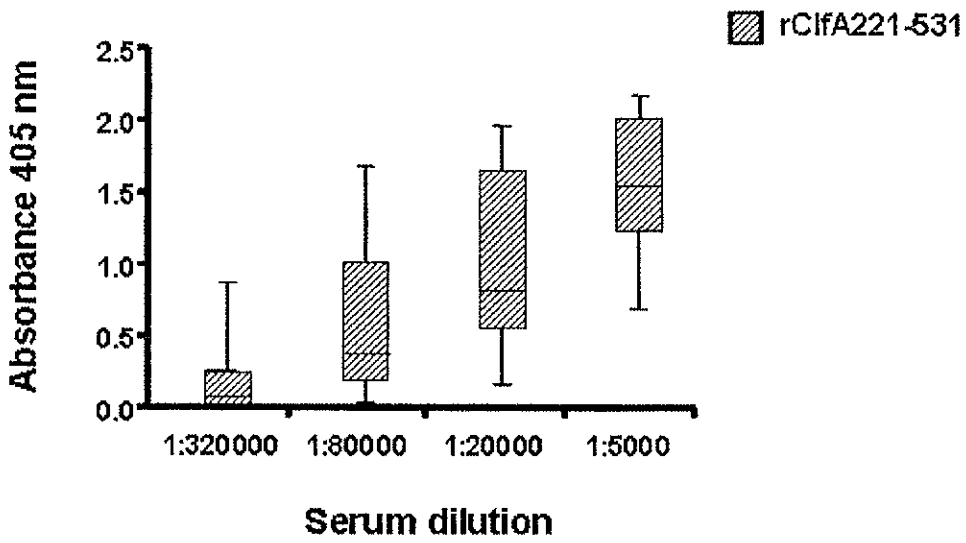

rClfA221-531
Absorbance 405 nm
2.5
2.0
1.5
1.0
0.5
0.0
1:320000
1:80000
1:20000
1:5000
Serum dilution

Fig. 18