Figure 1

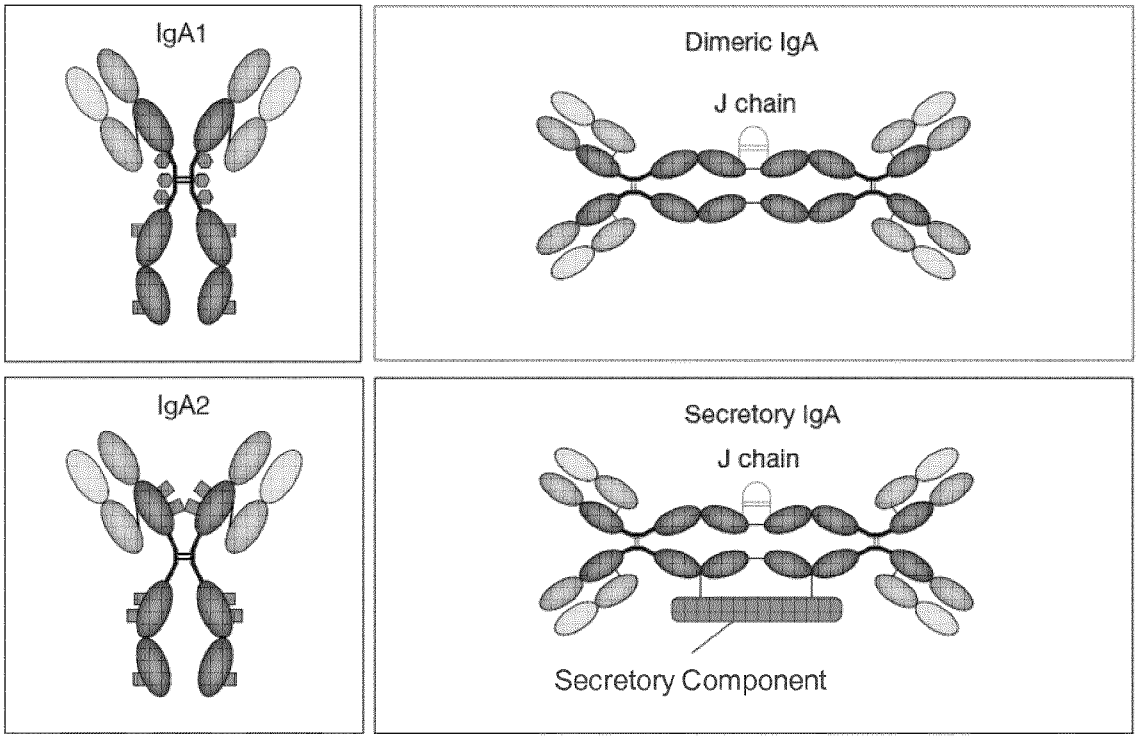
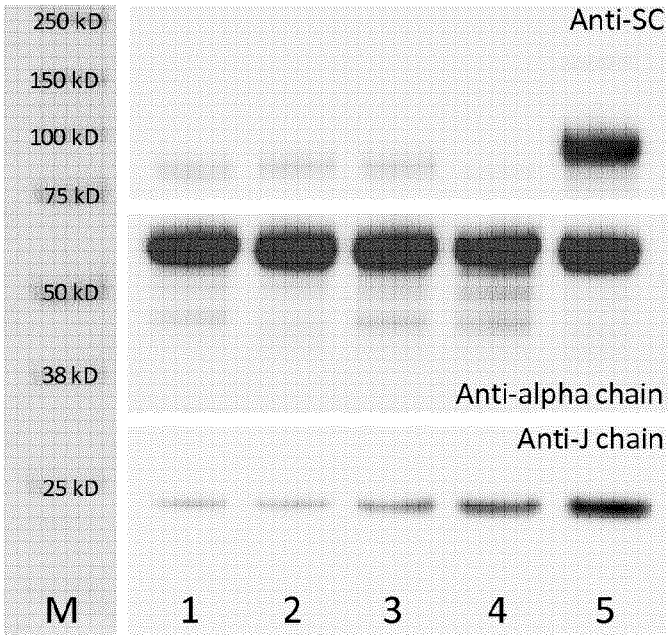
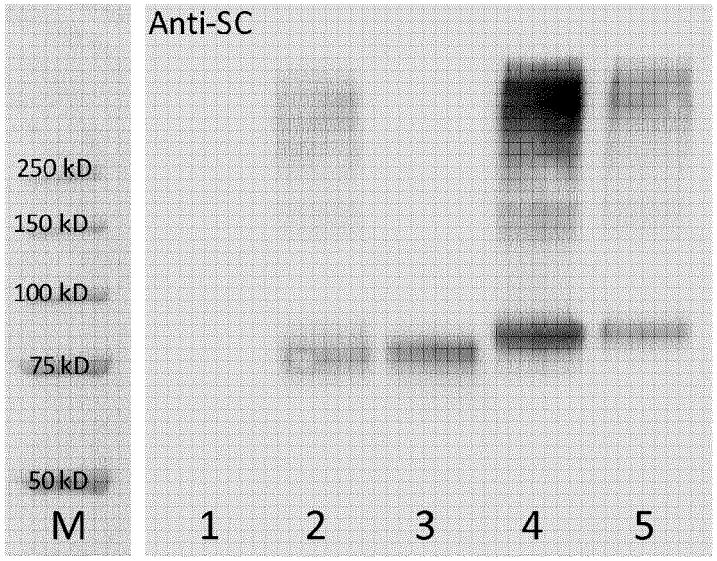

IgA1
Dimeric IgA
J chain
IgA2
Secretory IgA
J chain
Secretory Component

Figure 2A



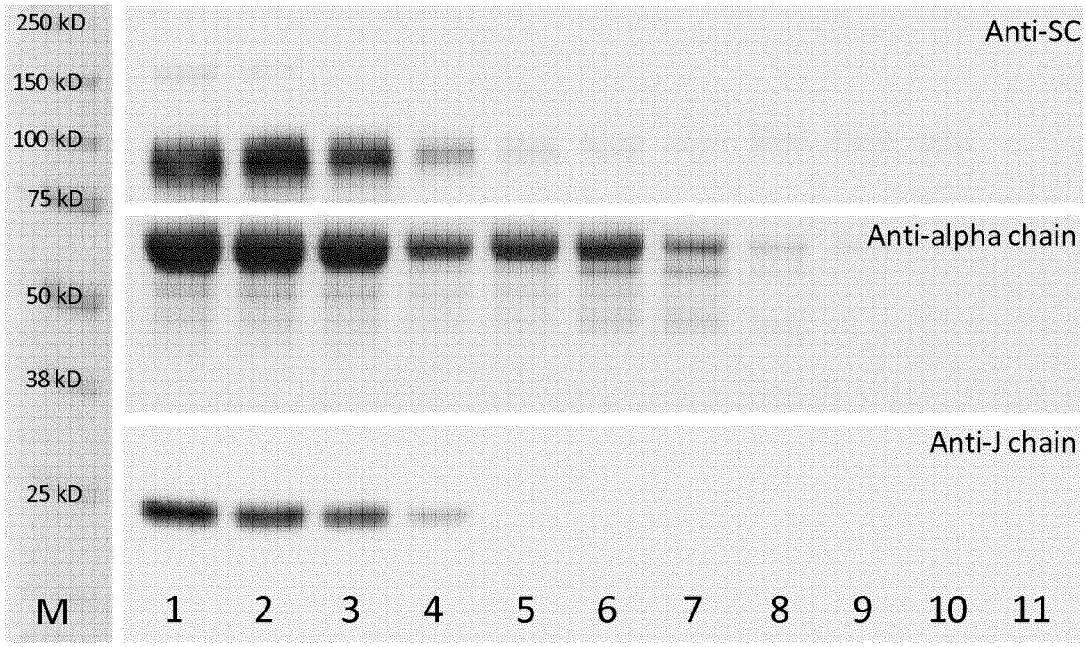
1) IgA from plasma
2) IgA from re-solubilized paste
3) IgA from column strip
4) IgA F5
5) SIgA from milk

Figure 2B



1) IgA F5
2) Secretory-like IgA
3) recSC
4) SIgA from milk
5) SIgA from milk, 1:5

Figure 2C



1) SEC Fraction 8.0-8.5 min
2) SEC Fraction 8.5-9.0 min
3) SEC Fraction 9.0-9.5 min
4) SEC Fraction 9.5-10.0 min
5) SEC Fraction 10.0-10.5 min
6) SEC Fraction 10.5-11.0 min
7) SEC Fraction 11.0-11.5 min
8) SEC Fraction 11.5-12.0 min
9) SEC Fraction 12.0-12.5 min
10) SEC Fraction 12.5-13.0 min
11) SEC Fraction 13.0-13.5 min

Figure 2D

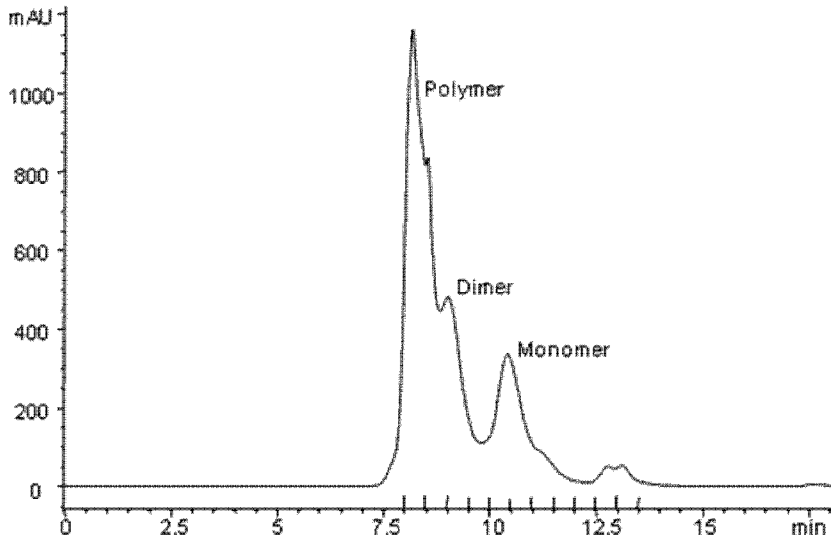

mAU
1000
800
600
400
200
0
Polymer
Dimer
Monomer
0
2.5
5
7.5
10
12.5
15
min

Figure 3

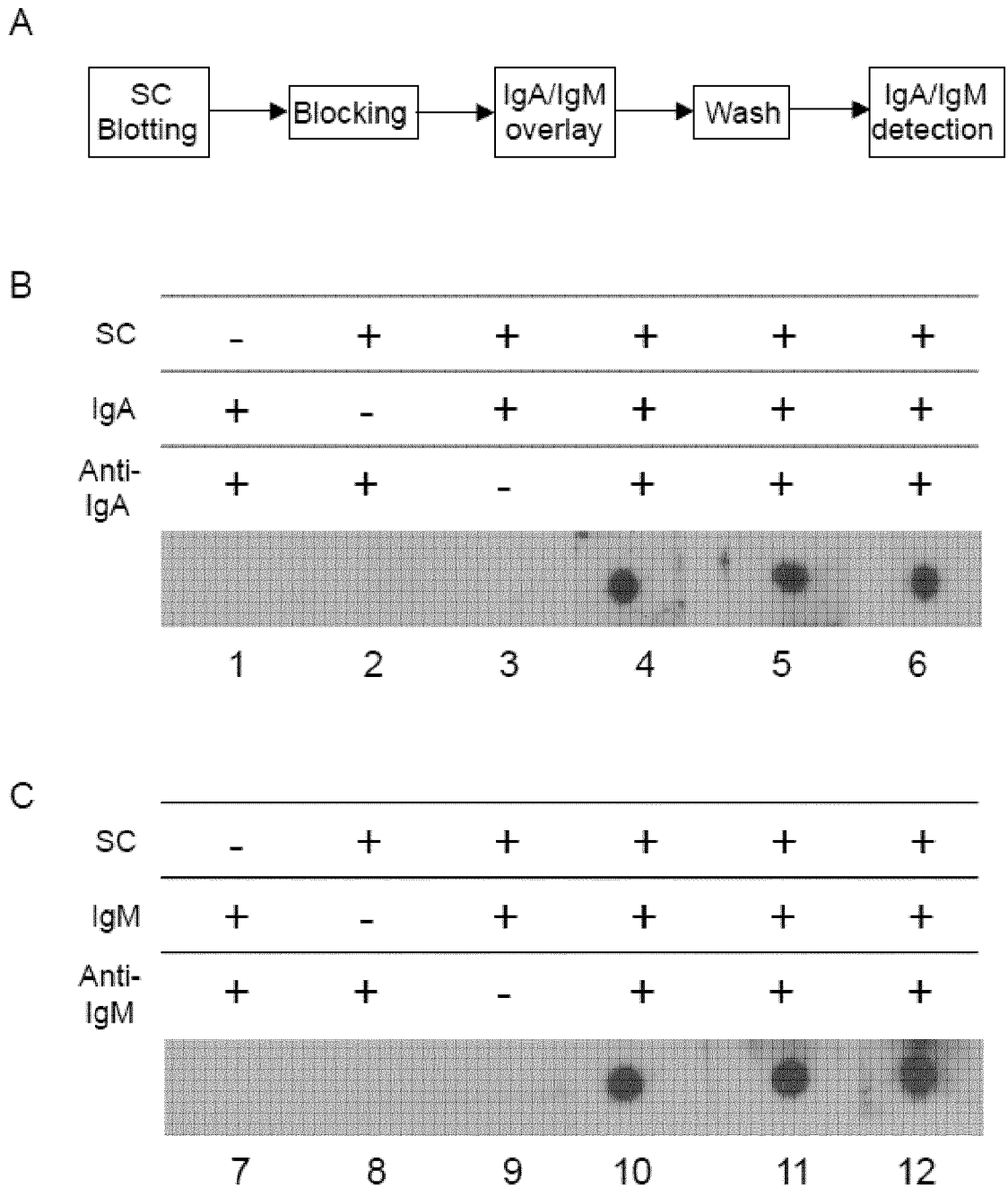

A
SC Blotting
Blocking
IgA/IgM overlay
Wash
IgA/IgM detection
B
SC - + + + + +
IgA + - + + + +
Anti-IgA + + - + + +
1 2 3 4 5 6
C
SC - + + + + +
IgM + - + + + +
Anti-IgM + + - + + +
7 8 9 10 11 12

Figure 4A

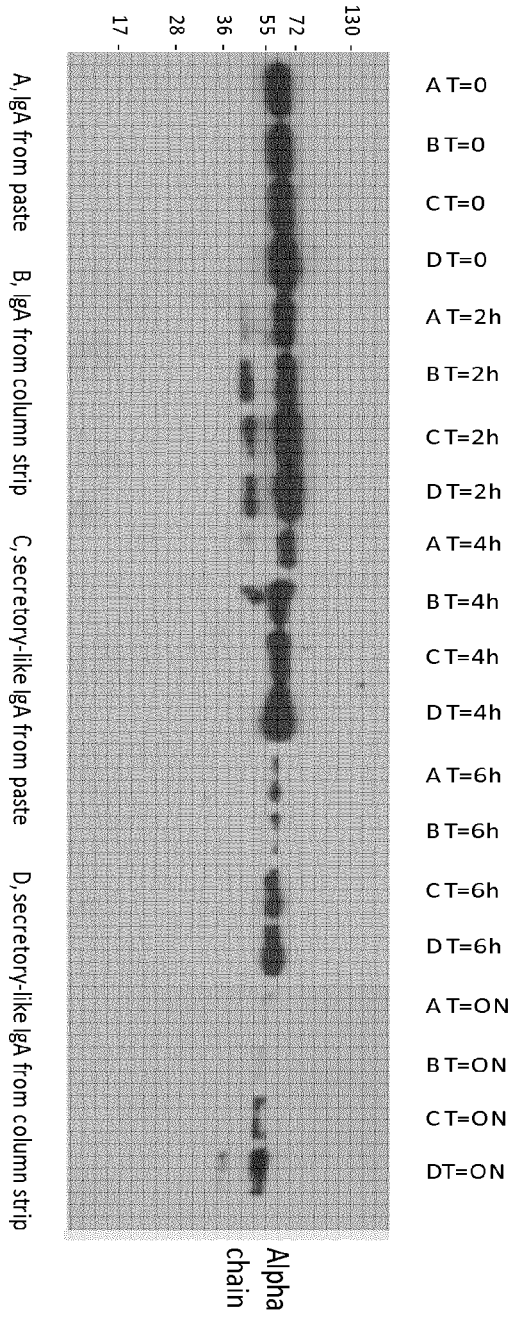

130
72
55
36
28
17
A T=0
B T=0
C T=0
D T=0
A T=2h
B T=2h
C T=2h
D T=2h
A T=4h
B T=4h
C T=4h
D T=4h
A T=6h
B T=6h
C T=6h
D T=6h
A T=ON
B T=ON
C T=ON
DT=ON
Alpha chain
A, IgA from paste
B, IgA from column strip
C, secretory-like IgA from paste
D, secretory-like IgA from column strip

Figure 4B

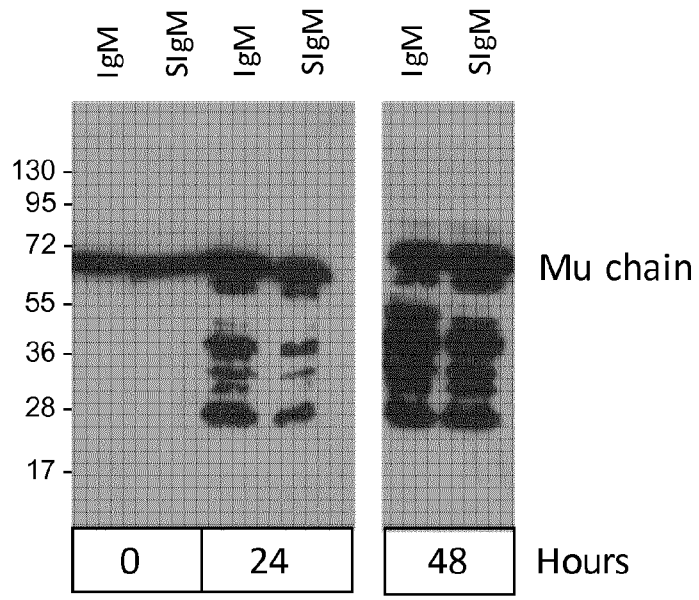

IgM
SIgM
IgM
SIgM
IgM
SIgM
130
95
72
55
36
28
17
Mu chain
0
24
48
Hours

Figure 5A

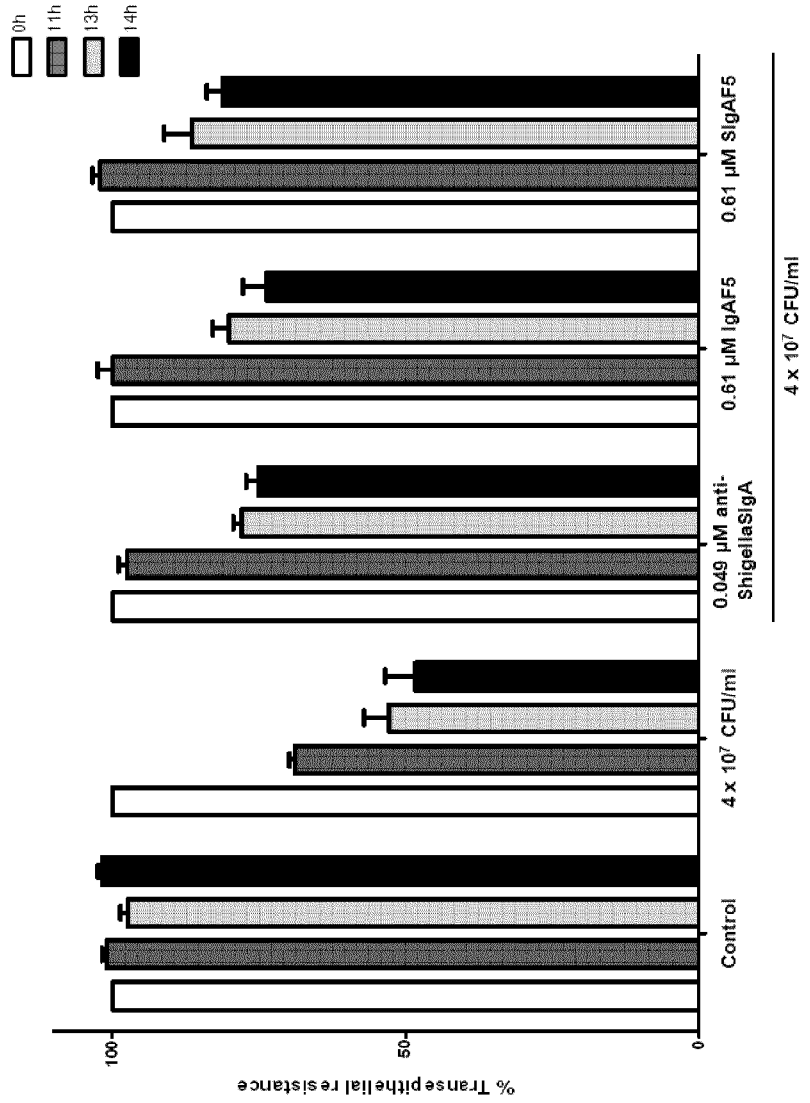

0h
11h
13h
14h
% Transepithelial resistance
100
50
0
Control
4 x 10^7 CFU/ml
0.049 µM anti-ShigellaSIgA
0.61 µM IgAF5
0.61 µM SIgAF5
4 x 10^7 CFU/ml

Figure 5B

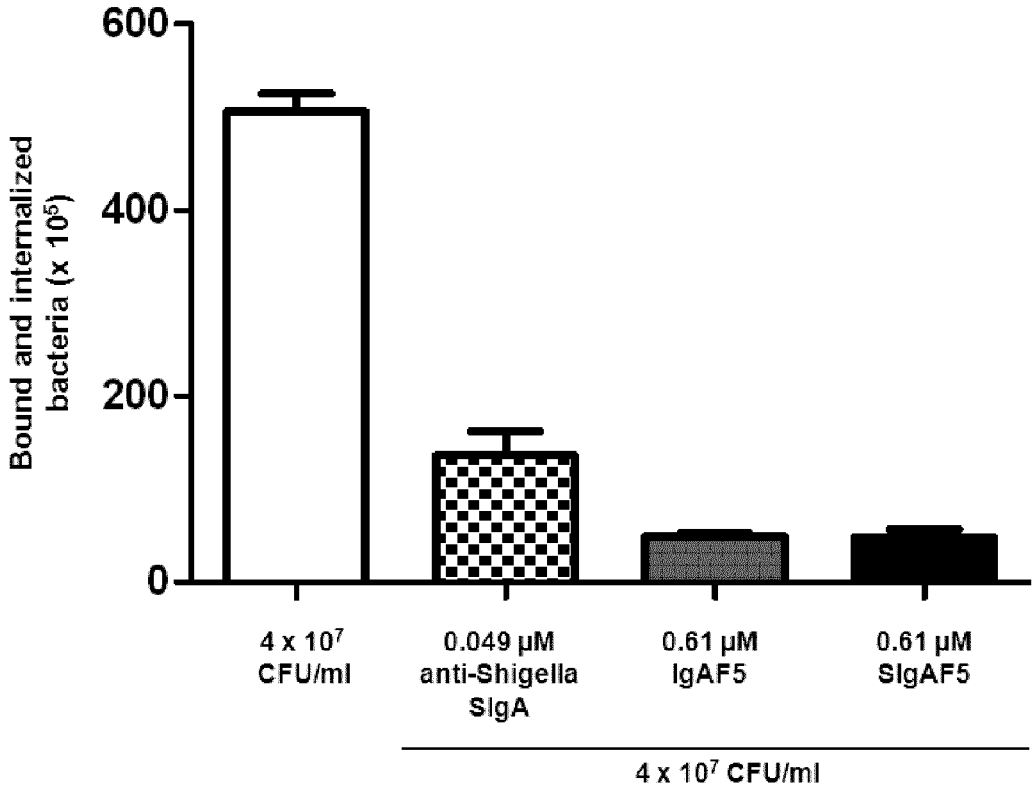

600
400
200
0
Bound and internalized bacteria (x 10^5)
4 x 10^7 CFU/ml
0.049 µM anti-Shigella SIgA
0.61 µM IgAF5
0.61 µM SIgAF5
4 x 10^7 CFU/ml

Figure 6

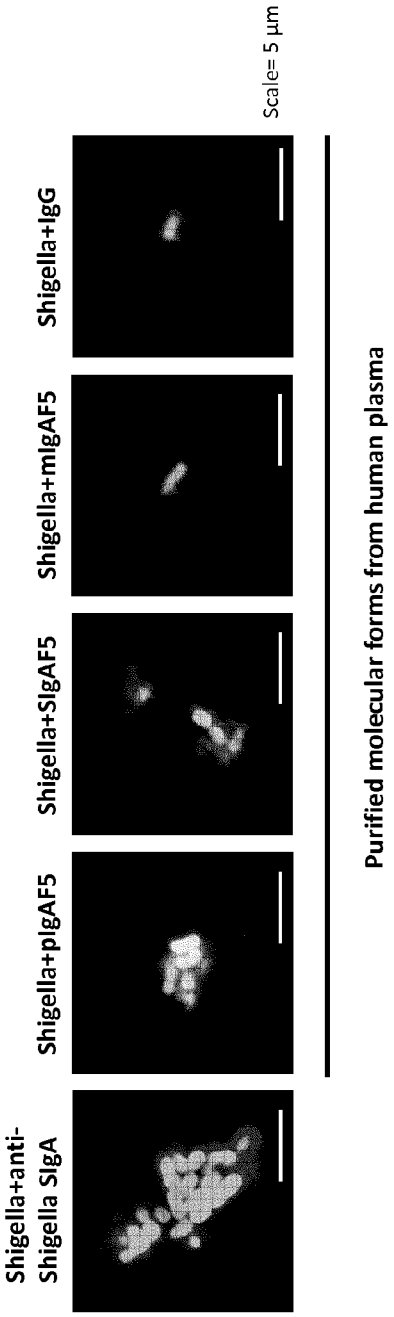

Scale= 5 µm
Shigella+anti-Shigella SIgA
Shigella+pIgAF5
Shigella+SIgAF5
Shigella+mIgAF5
Shigella+IgG
Purified molecular forms from human plasma

Figure 7

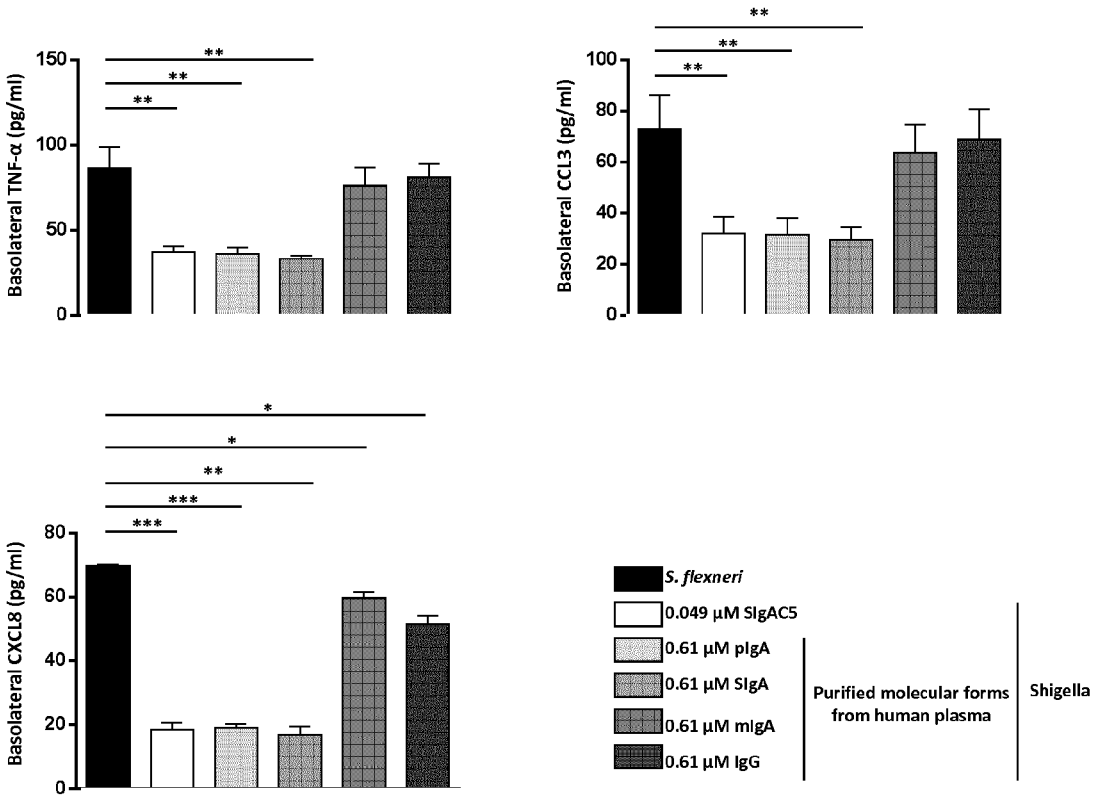
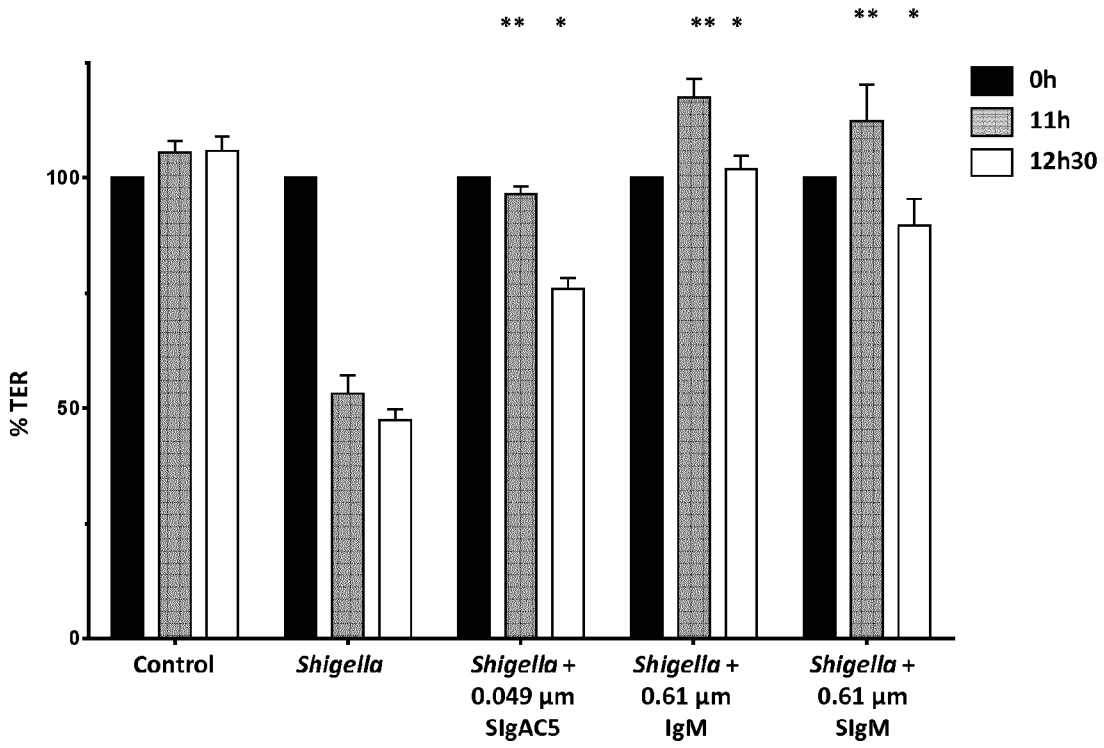

Basolateral TNF-α (pg/ml)
150
100
50
0
**
**
**
Basolateral CCL3 (pg/ml)
100
80
60
40
20
0
**
**
**
Basolateral CXCL8 (pg/ml)
80
60
40
20
0
*
*
**
***
***
S. flexneri
0.049 µM SIgAC5
0.61 µM pIgA
0.61 µM SIgA
0.61 µM mIgA
0.61 µM IgG
Purified molecular forms from human plasma
Shigella

Figure 8


** *
** *
** *
0h
11h
12h30
% TER
100
50
0
Control
Shigella
Shigella + 0.049 µm SIgAC5
Shigella + 0.61 µm IgM
Shigella + 0.61 µm SIgM