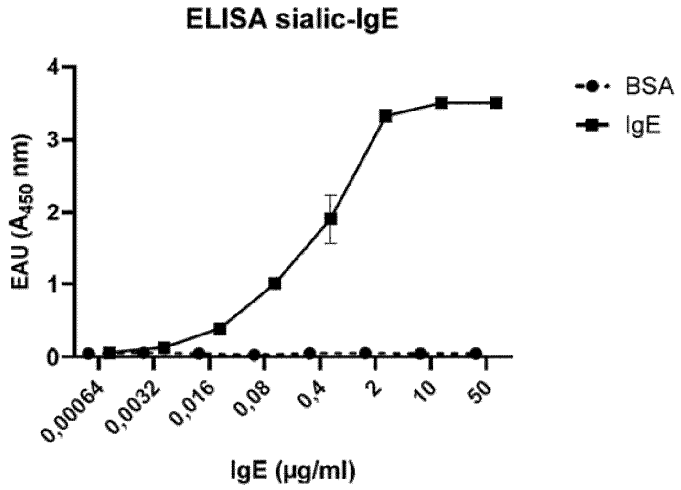


Figure 1

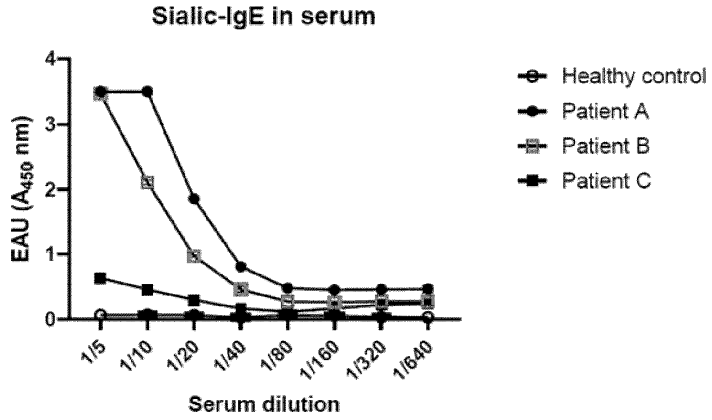


Figure 2

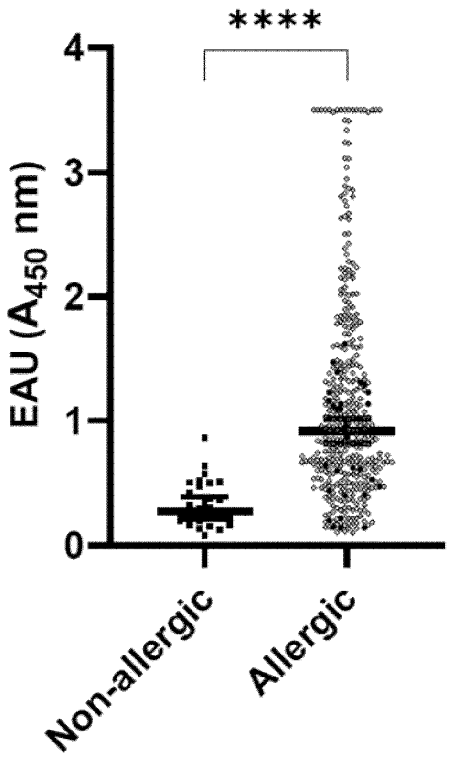


Figure 3

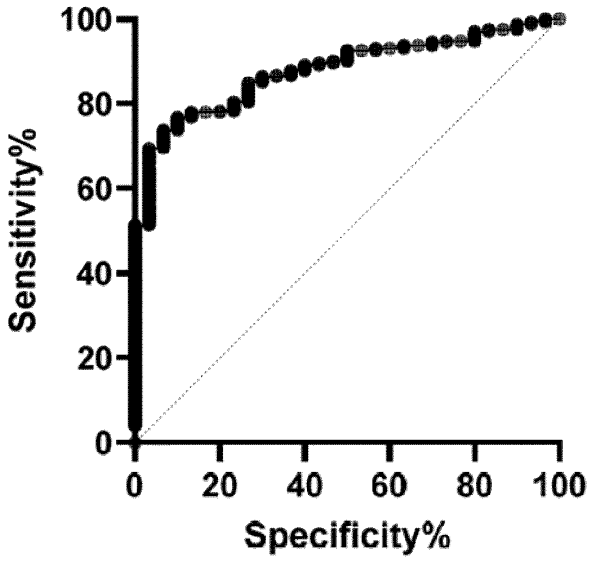


Figure 4

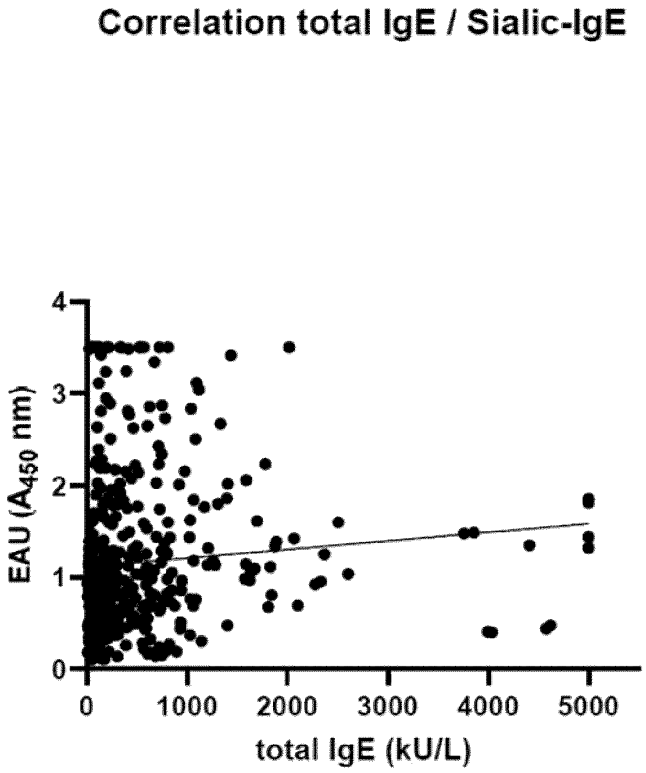

Correlation total IgE / Sialic-IgE
EAU (A450 nm)
0
1
2
3
4
0
1000
2000
3000
4000
5000
total IgE (kU/L)

Figure 5

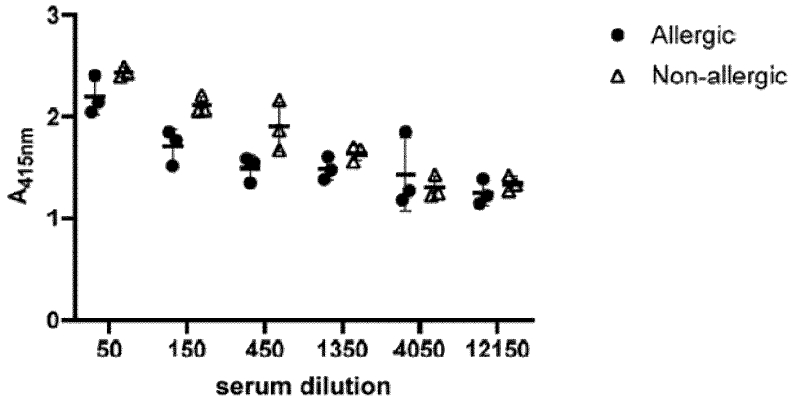

3
2
1
0
A_{415nm}
50
150
450
1350
4050
12150
serum dilution
Allergic
Non-allergic

Figure 6

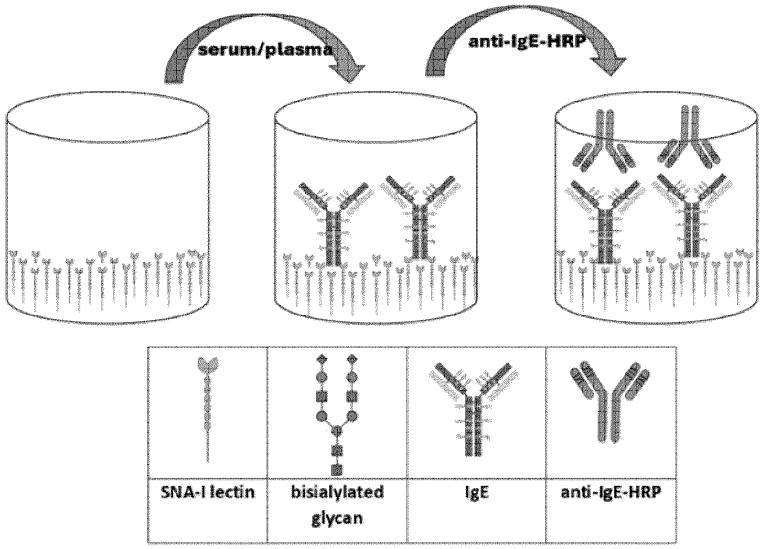

serum/plasma
anti-IgE-HRP
SNA-I lectin
bisialylated glycan
IgE
anti-IgE-HRP

Figure 7a

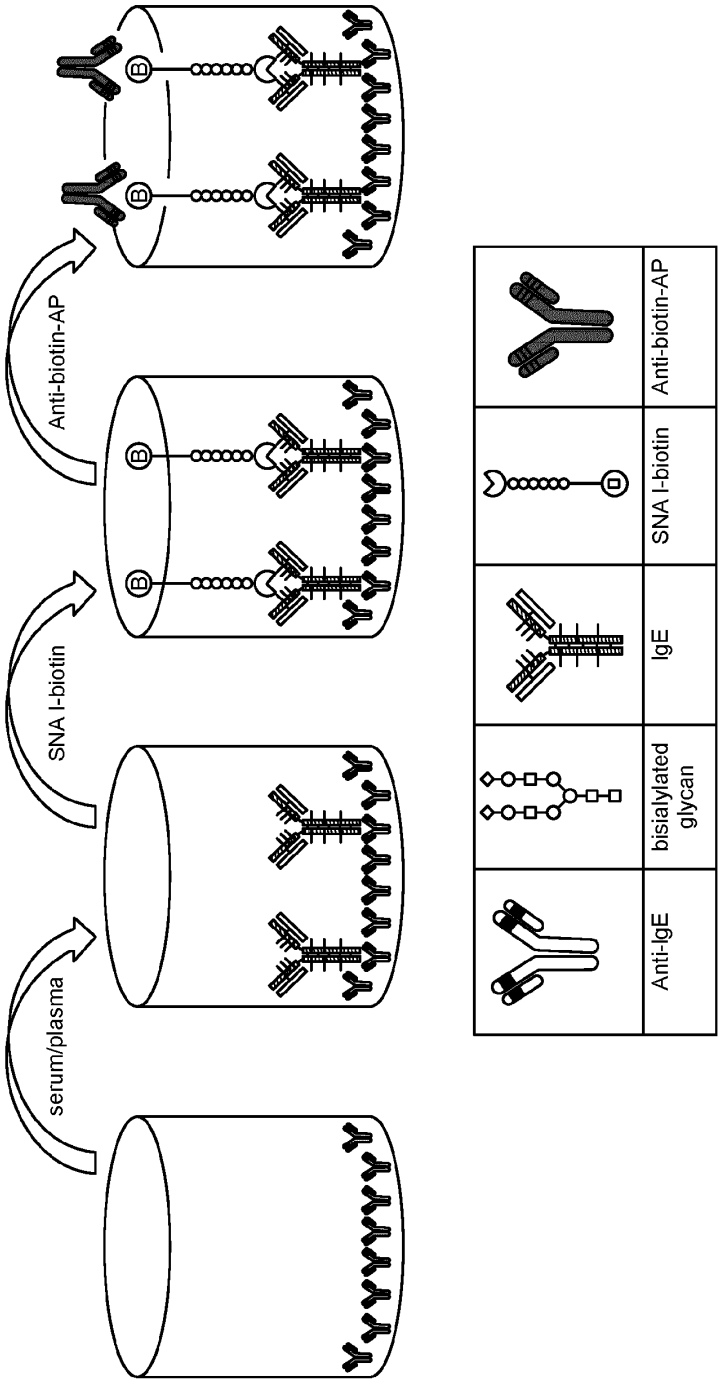

serum/plasma
SNA I-biotin
Anti-biotin-AP
Anti-IgE
bisialylated glycan
IgE
SNA I-biotin
Anti-biotin-AP

Figure 7b

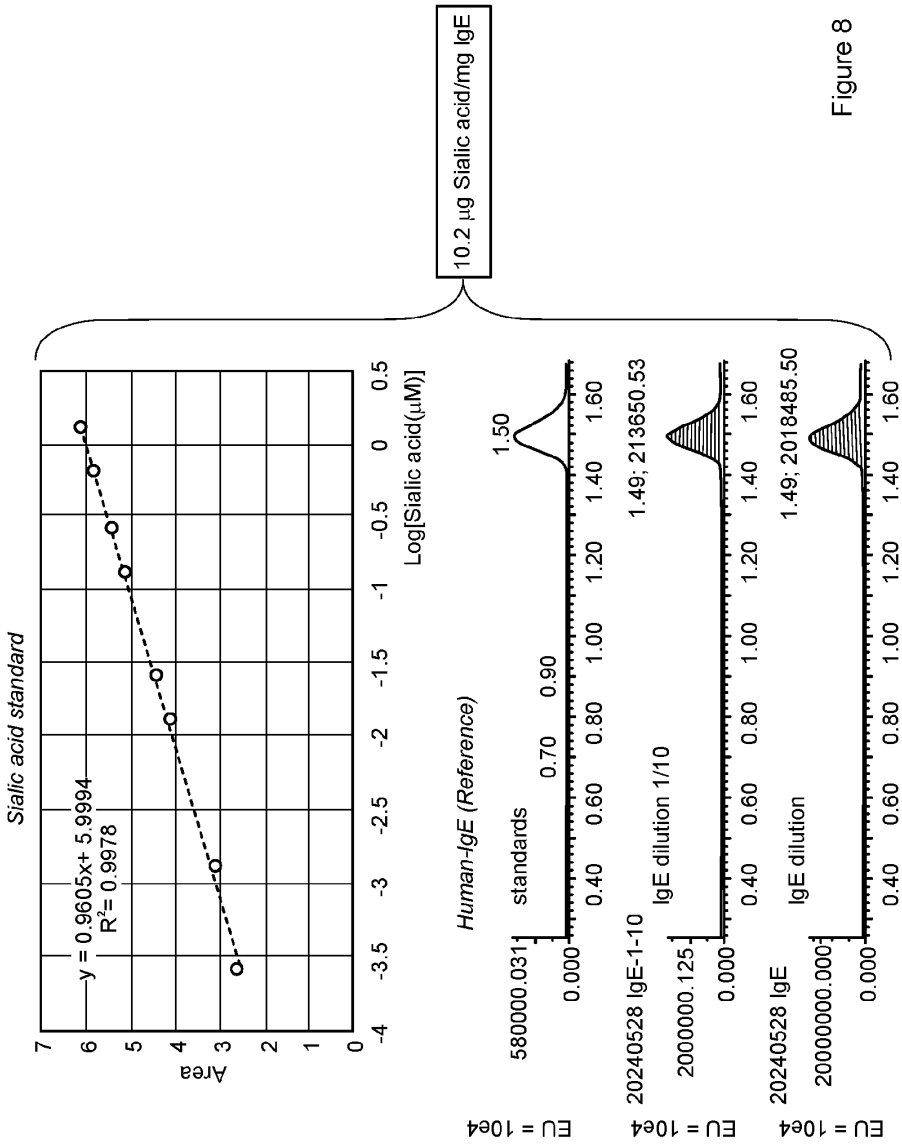
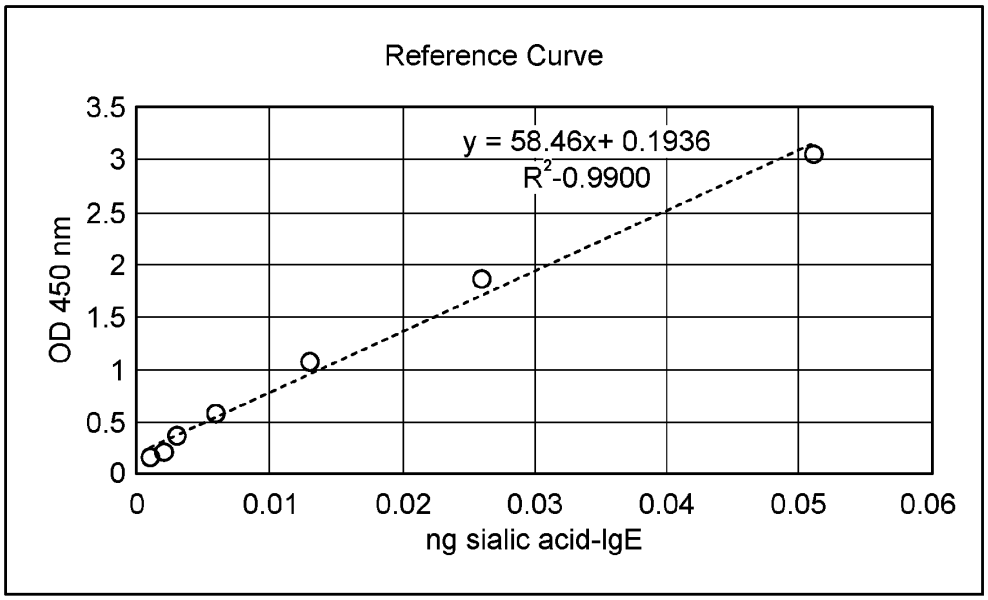

10.2 µg Sialic acid/mg IgE
Sialic acid standard
y = 0.9605x+ 5.9994
R²= 0.9978
Area
Log[Sialic acid(µM)]
Human-IgE (Reference)
580000.031
standards
1.50
20240528 IgE-1-10
IgE dilution 1/10
1.49; 213650.53
2000000.125
20240528 IgE
IgE dilution
1.49; 2018485.50
20000000.000
EU = 10e4
EU = 10e4
EU = 10e4

Figure 8

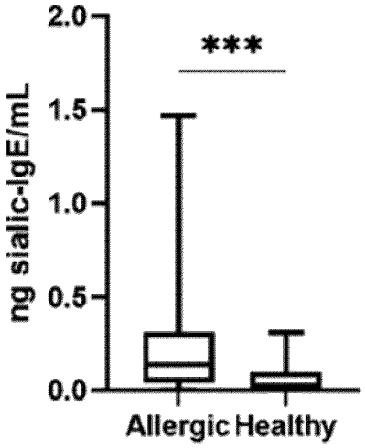
Serum dilution	OD 1	OD 2	Avg OD	%CV
8	1.545	1.442	1.494	4.877
35	0.97	0.917	0.944	3.972
32	0.634	0.661	0.648	2.949



Extrapolation

0.19 ng sialic acid-IgE/mL of serum

Figure 9



Column B	Healthy
vs.	vs.
Column A	Allergic
Mann Whitney test	
P value	0,0002
Exact or approximate P value?	Exact
P value summary	***
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,B	1673 , 605
Mann-Whitney U	254
Difference between medians	
Median of column A	0,1400, n=41
Median of column B	0,02500, n=26
Difference: Actual	-0,1150
Difference: Hodges-Lehmann	-0,08000

Figure 10

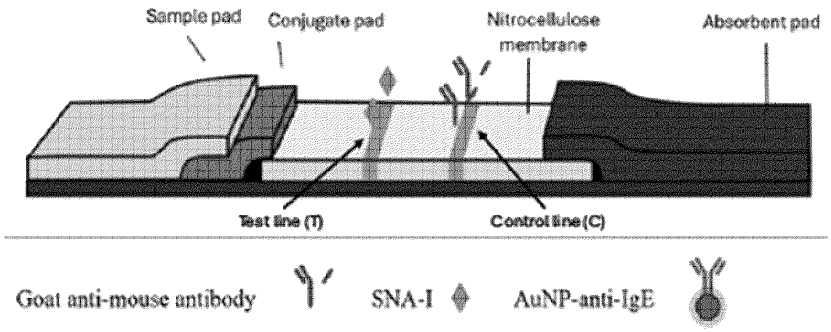

Sample pad
Conjugate pad
Nitrocellulose membrane
Absorbent pad
Test line (T)
Control line (C)
Goat anti-mouse antibody
SNA-I
AuNP-anti-IgE

Figure 11

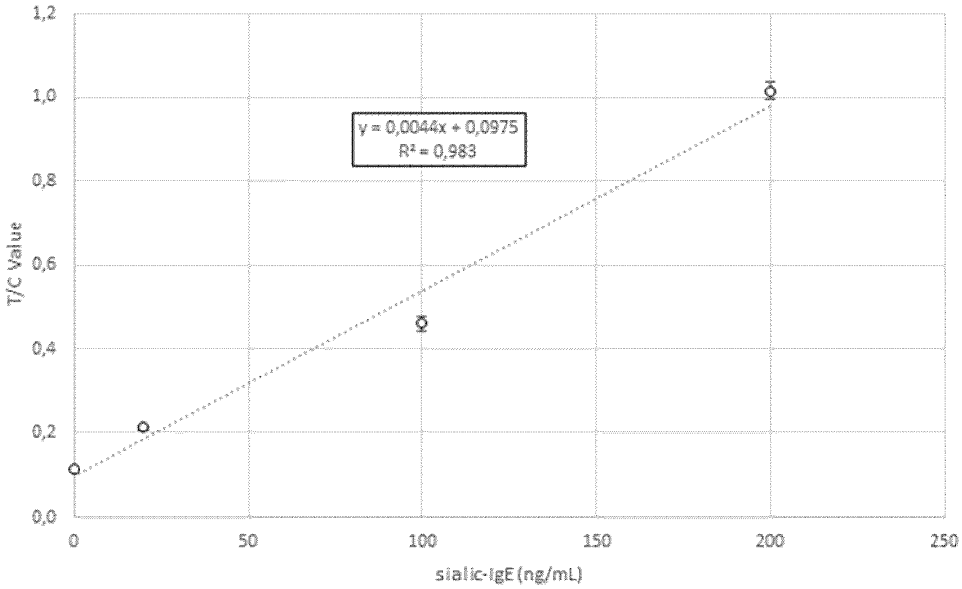

y = 0,0044x + 0,0975
R² = 0,983
T/C Value
sialic-IgE (ng/mL)
1,2
1,0
0,8
0,6
0,4
0,2
0,0
0
50
100
150
200
250

Figure 12

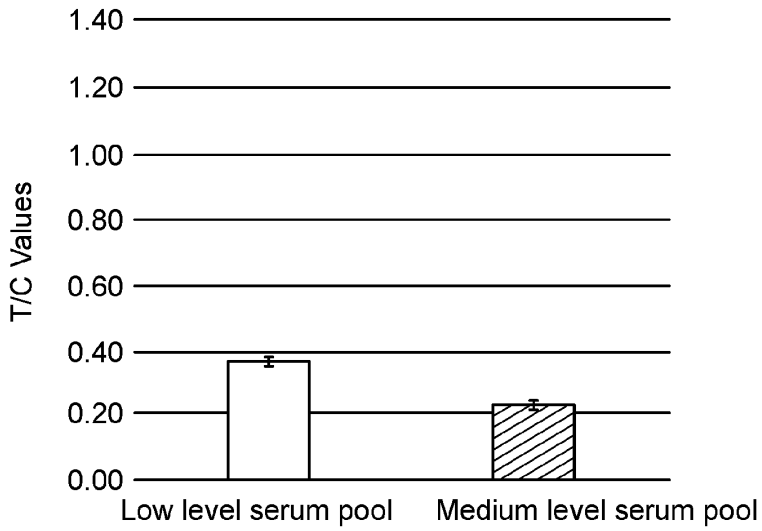


Figure 13A

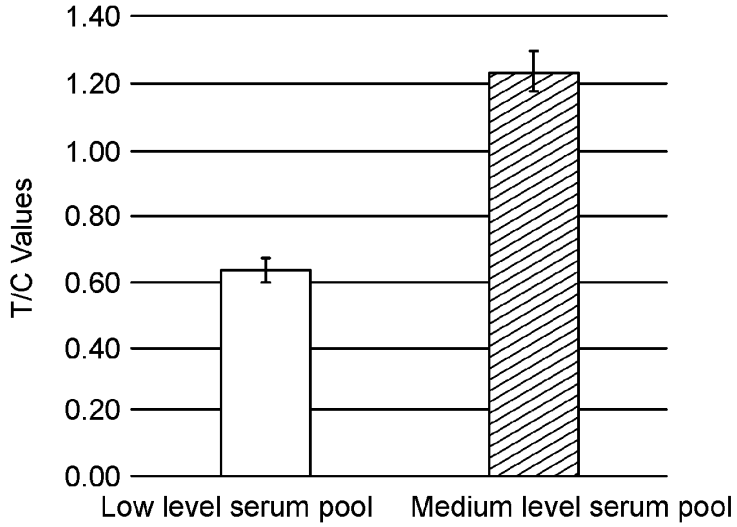


Figure 13B

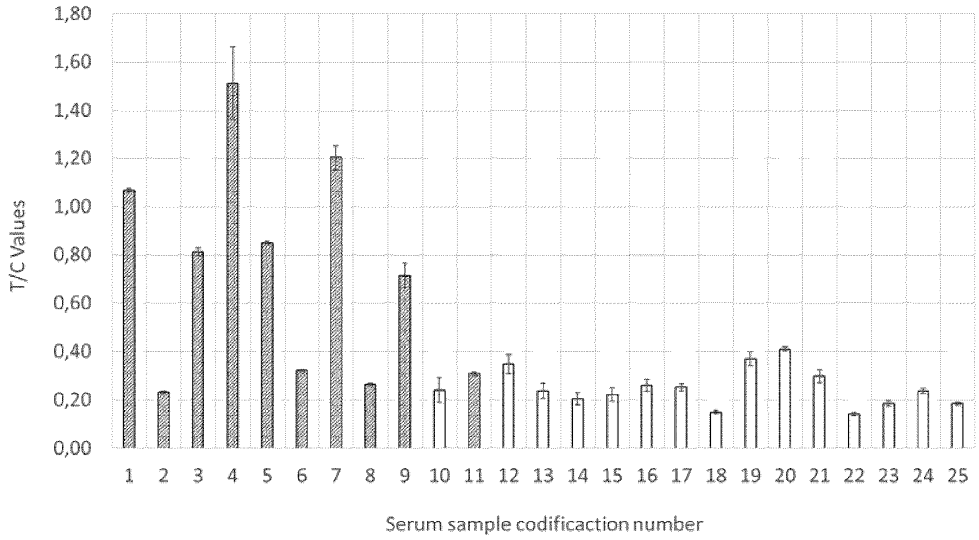

1,80
1,60
1,40
1,20
1,00
0,80
0,60
0,40
0,20
0,00
T/C Values
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
Serum sample codificaction number

Figure 14