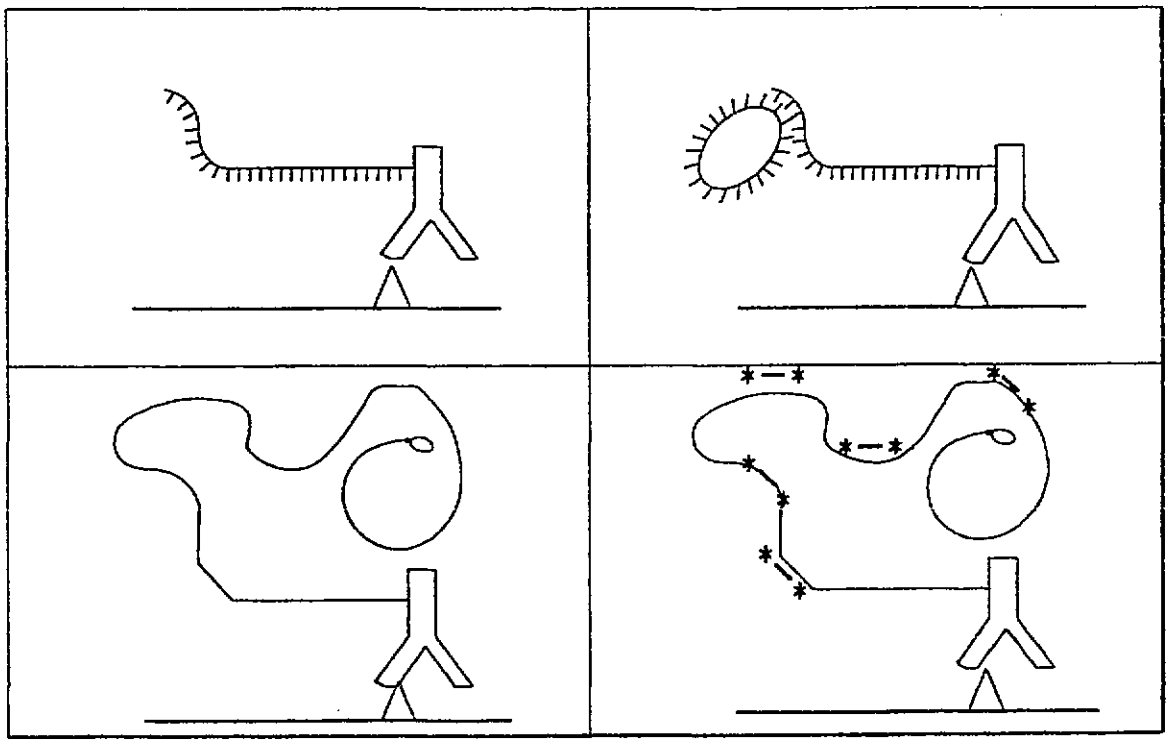


FIG.1

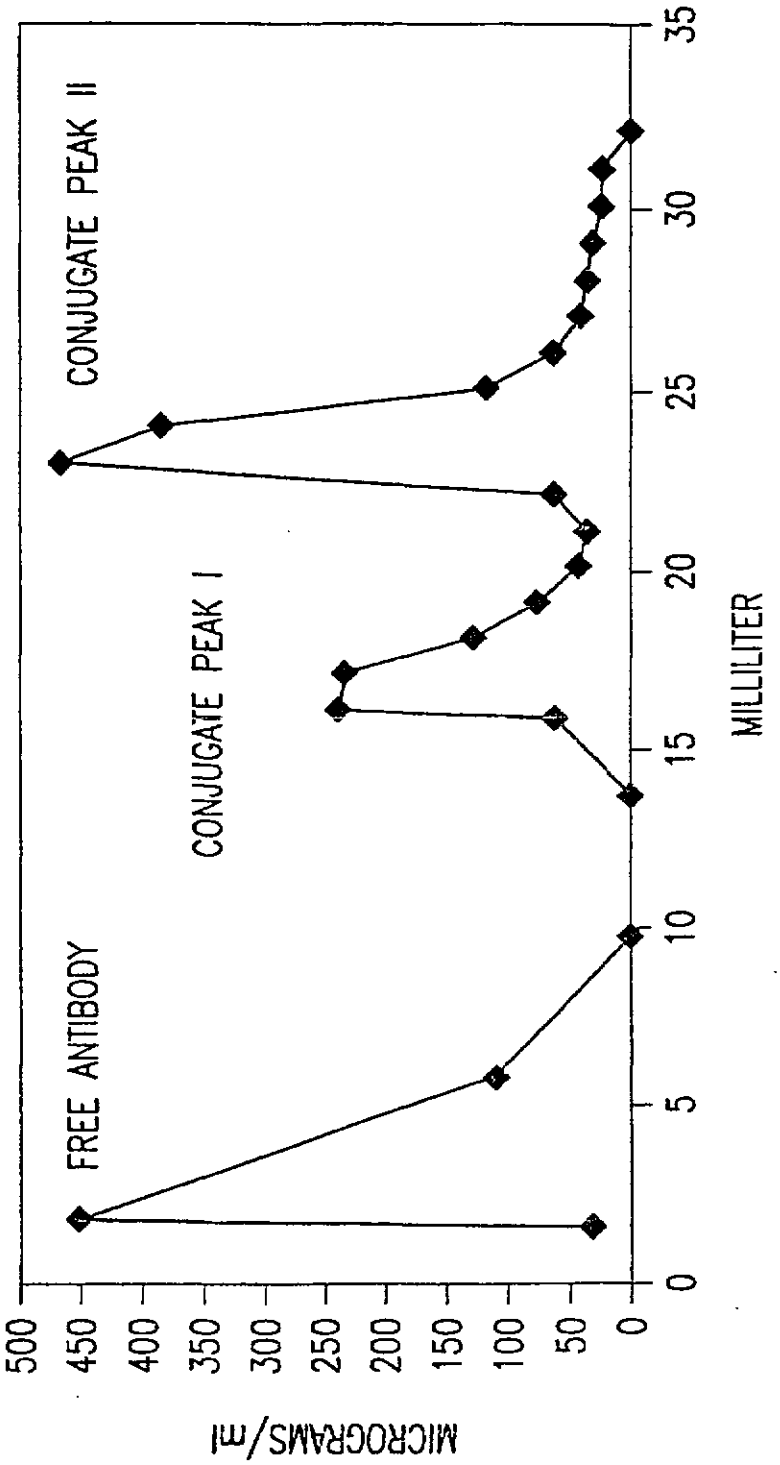

CONJUGATE PEAK II
CONJUGATE PEAK I
FREE ANTIBODY
MICROGRAMS/ml
MILLILITER
0
50
100
150
200
250
300
350
400
450
500
0
5
10
15
20
25
30
35

FIG.2

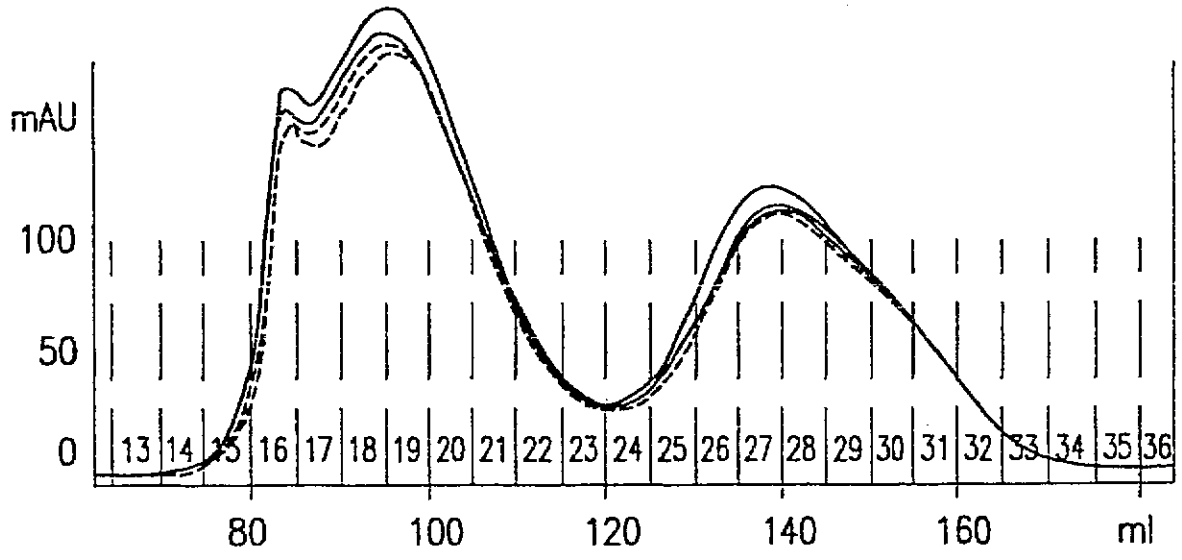

mAU
100
50
0
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
80
100
120
140
160
ml

FIG.3

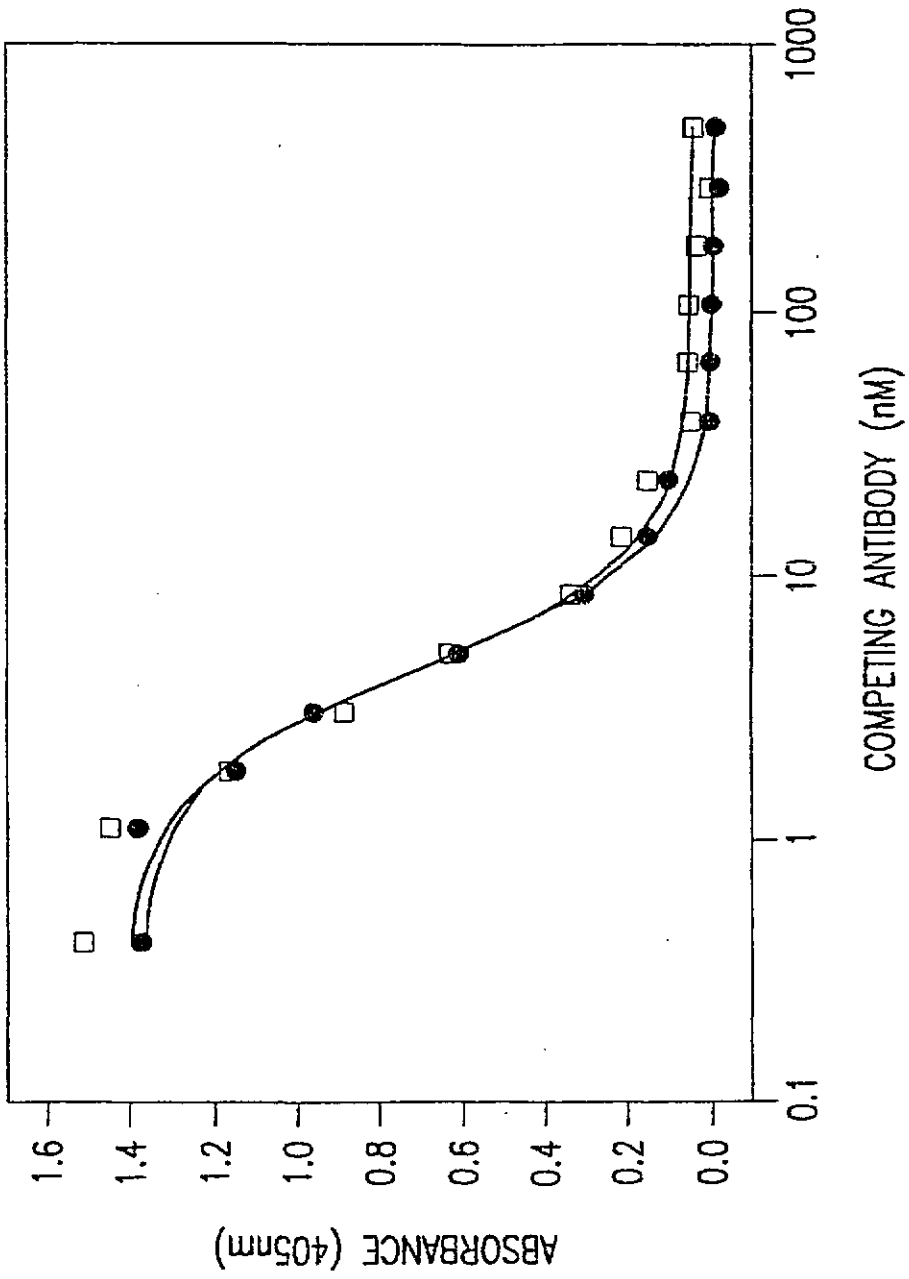

ABSORBANCE (405nm)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.1
1
10
100
1000
COMPETING ANTIBODY (nM)

FIG.4

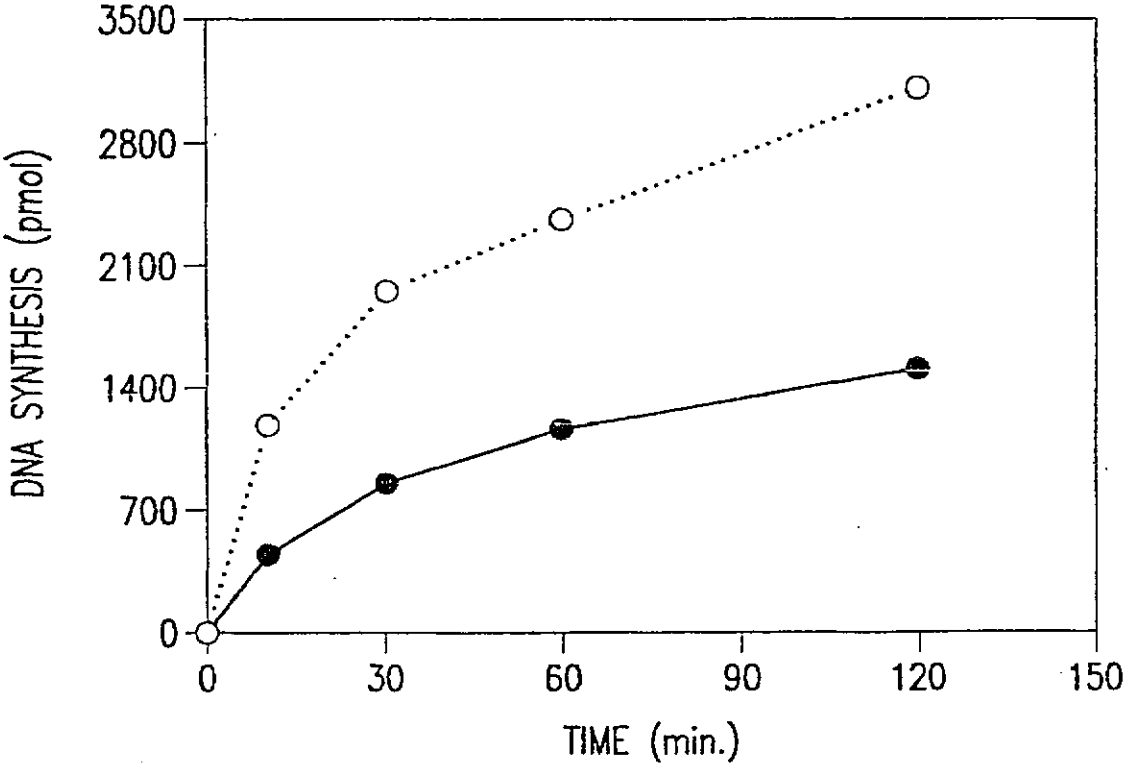

3500
2800
2100
1400
700
0
DNA SYNTHESIS (pmol)
0
30
60
90
120
150
TIME (min.)

FIG.5

Comparison of immunoRCA and conventional bead immunoassay.

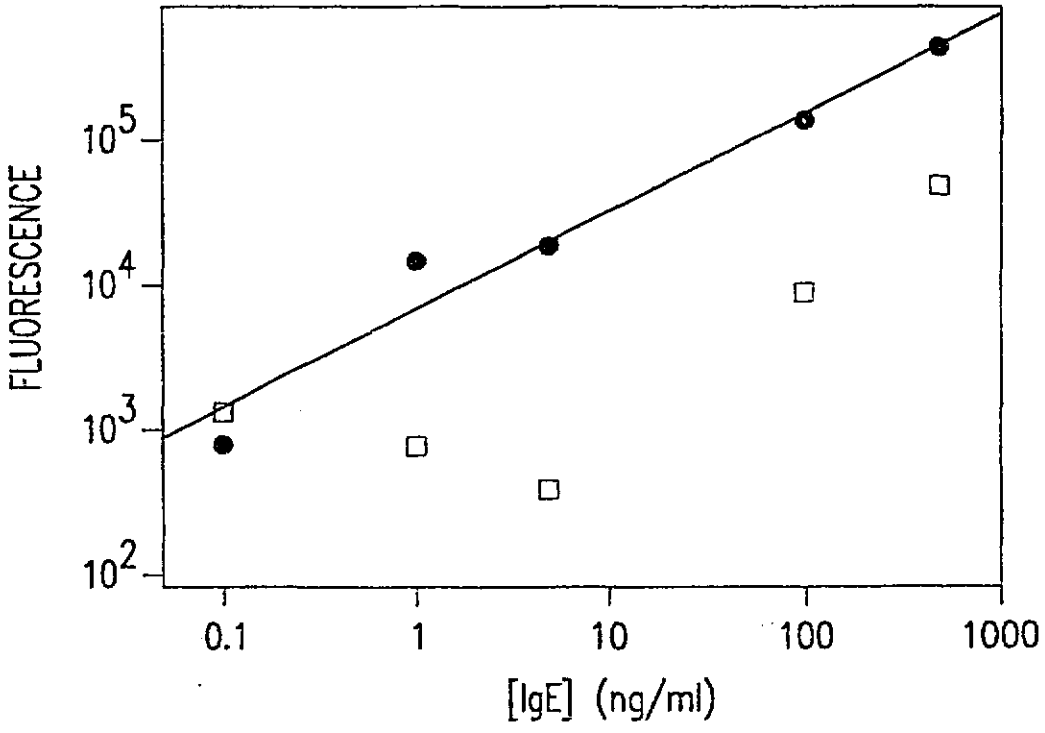


FIG.6

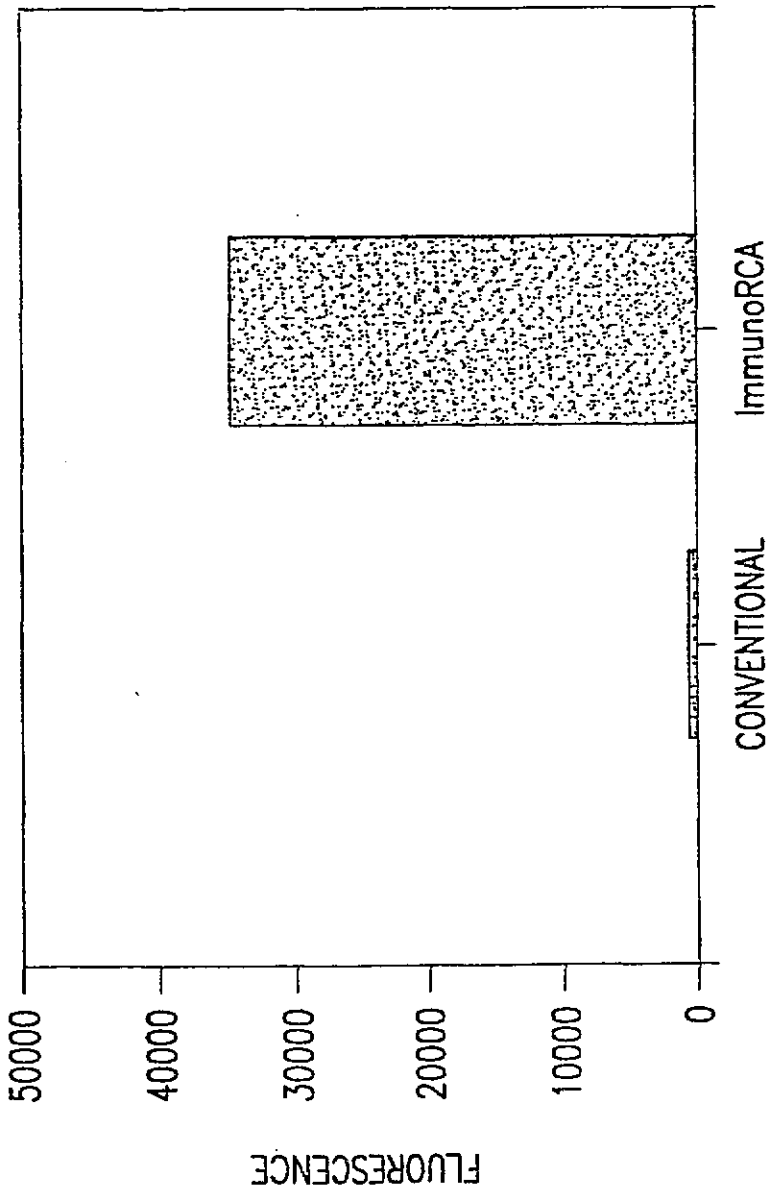

50000
40000
30000
20000
10000
0
FLUORESCENCE
CONVENTIONAL
ImmunoRCA

FIG.7

Detection of PSA by immunoRCA in a microspot assay.

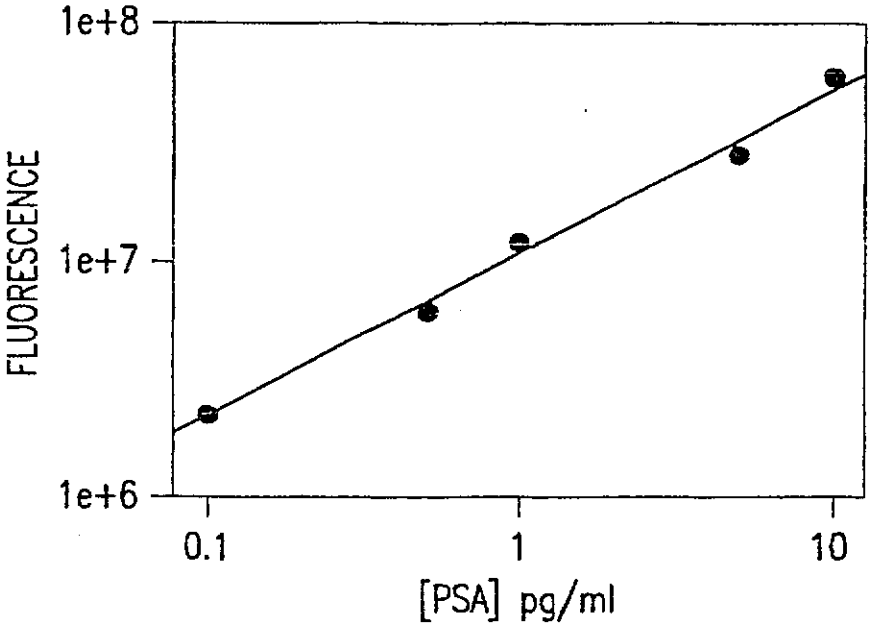


FIG.8

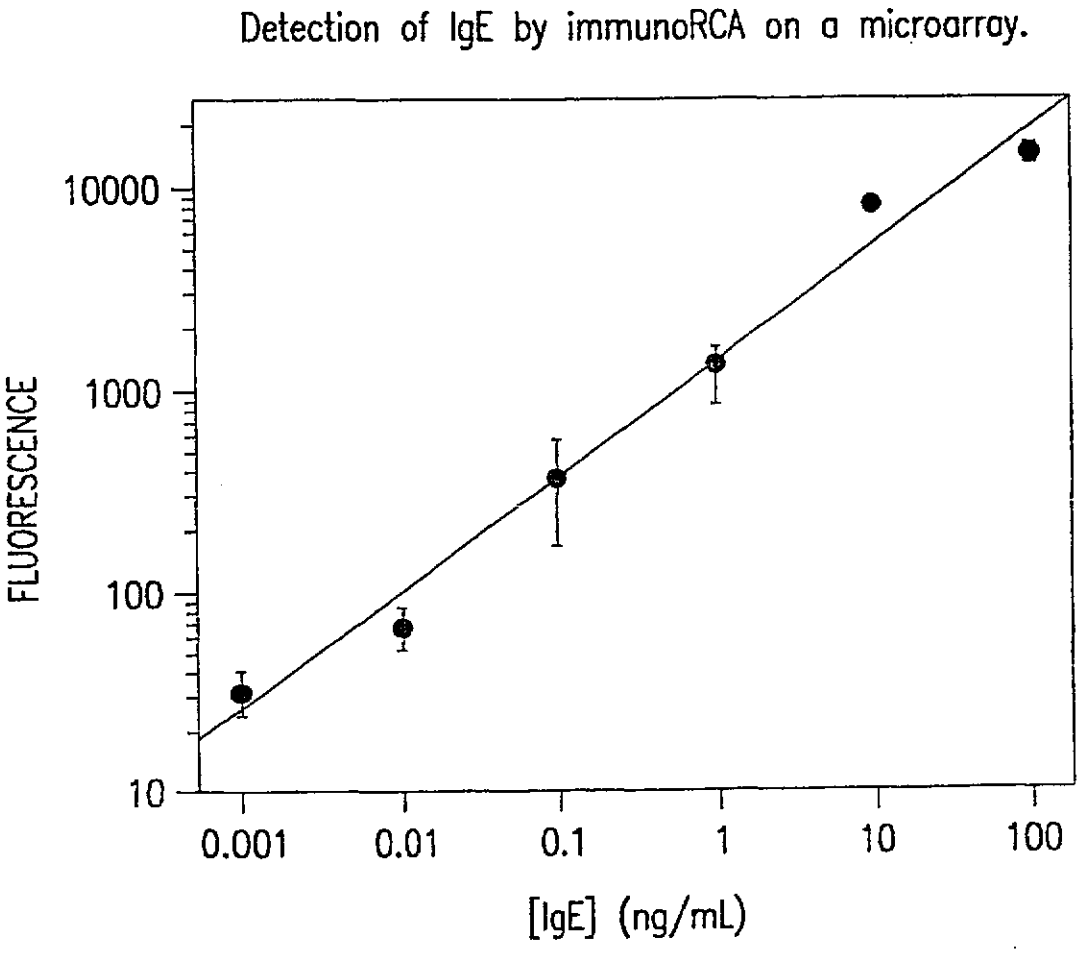

Detection of IgE by immunoRCA on a microarray.
FLUORESCENCE
10000
1000
100
10
0.001
0.01
0.1
1
10
100
[IgE] (ng/mL)

FIG.9

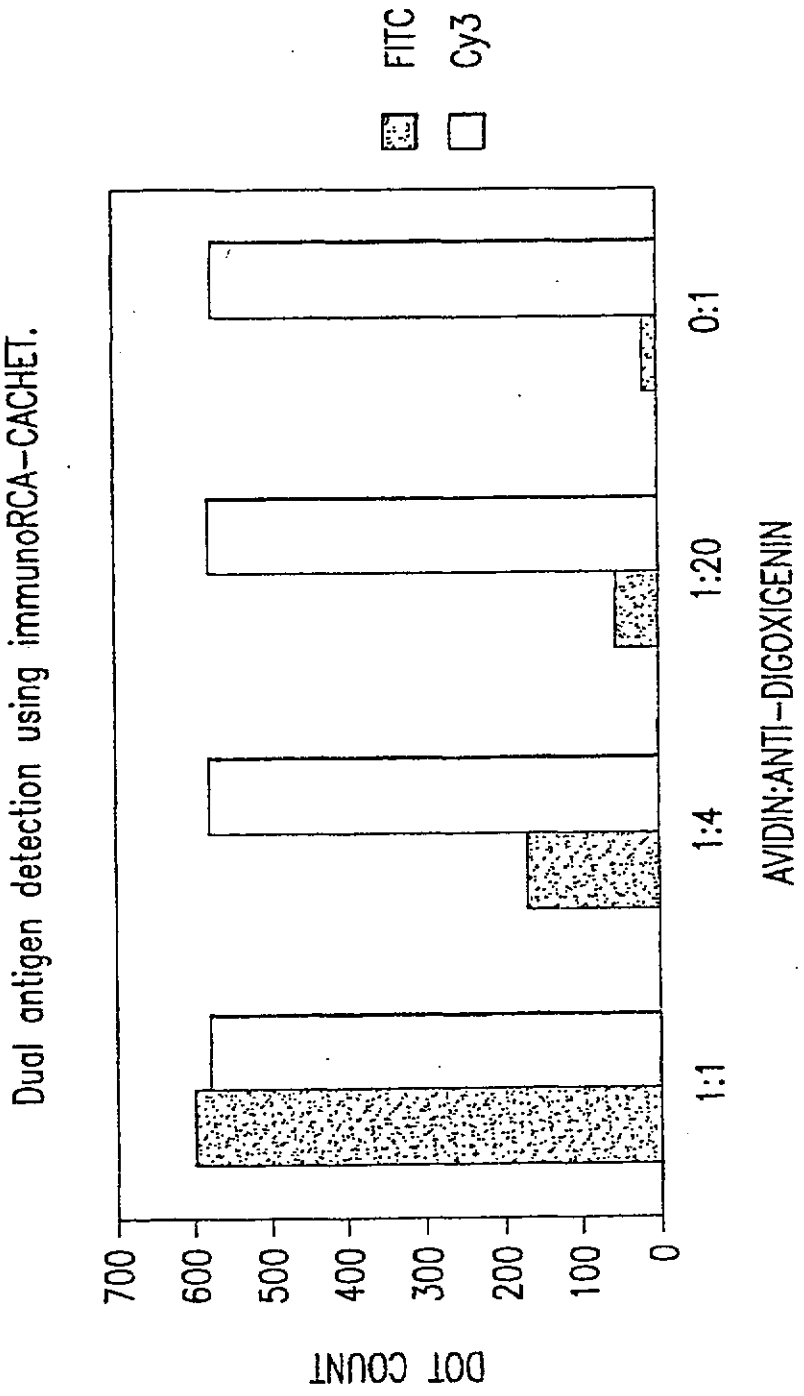

Dual antigen detection using immunoRCA-CACHET.
FITC
Cy3
DOT COUNT
700
600
500
400
300
200
100
0
1:1
1:4
1:20
0:1
AVIDIN:ANTI-DIGOXIGENIN

FIG.10

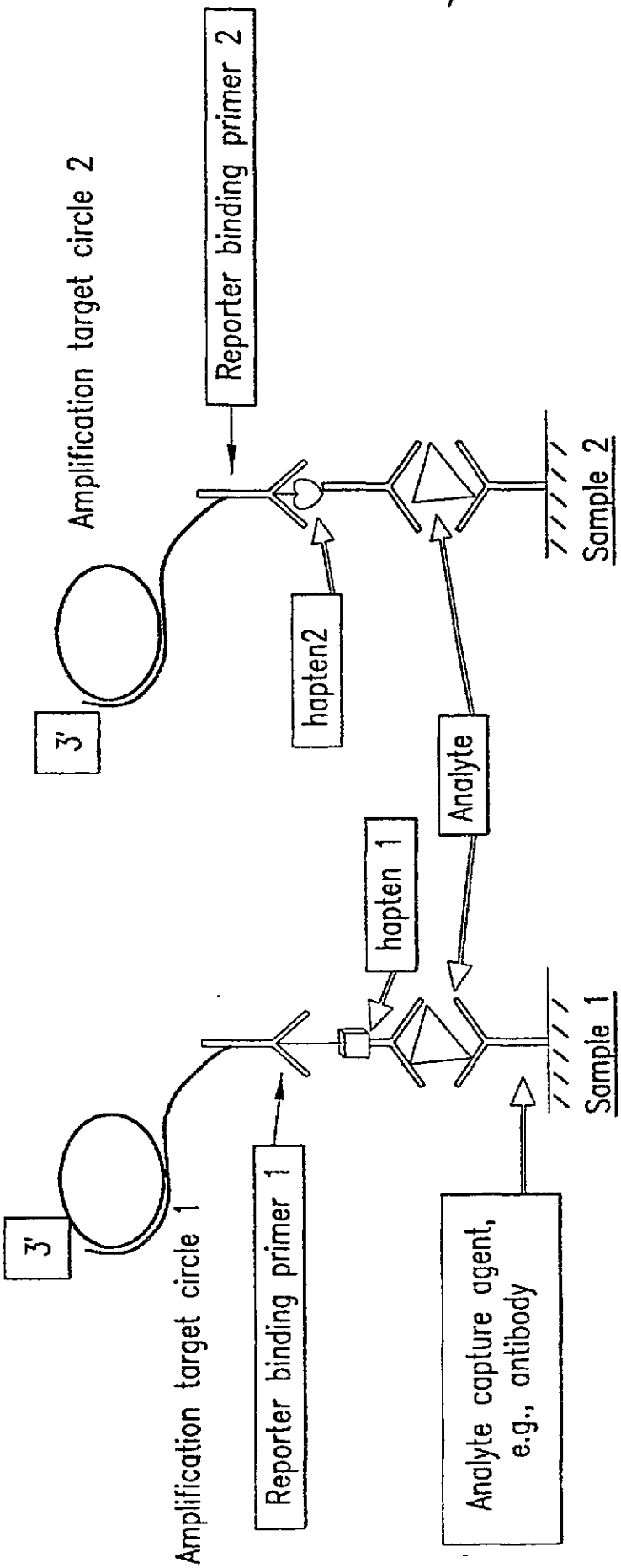

Amplification target circle 2
Reporter binding primer 2
3'
hapten2
Analyte
Sample 2
hapten 1
Amplification target circle 1
Reporter binding primer 1
Analyte capture agent, e.g., antibody
Sample 1
Provide analyte-containing Sample 2
Add analy capture agent 2
(hapten 2-labeled antibody)
Provide analyte-containing Sample 1
Add analyte capture agent 1
(hapten 1-labeled antibody)
Combine samples and add to microarray
Add reporter binding primers 1 and 2

FIG. 11

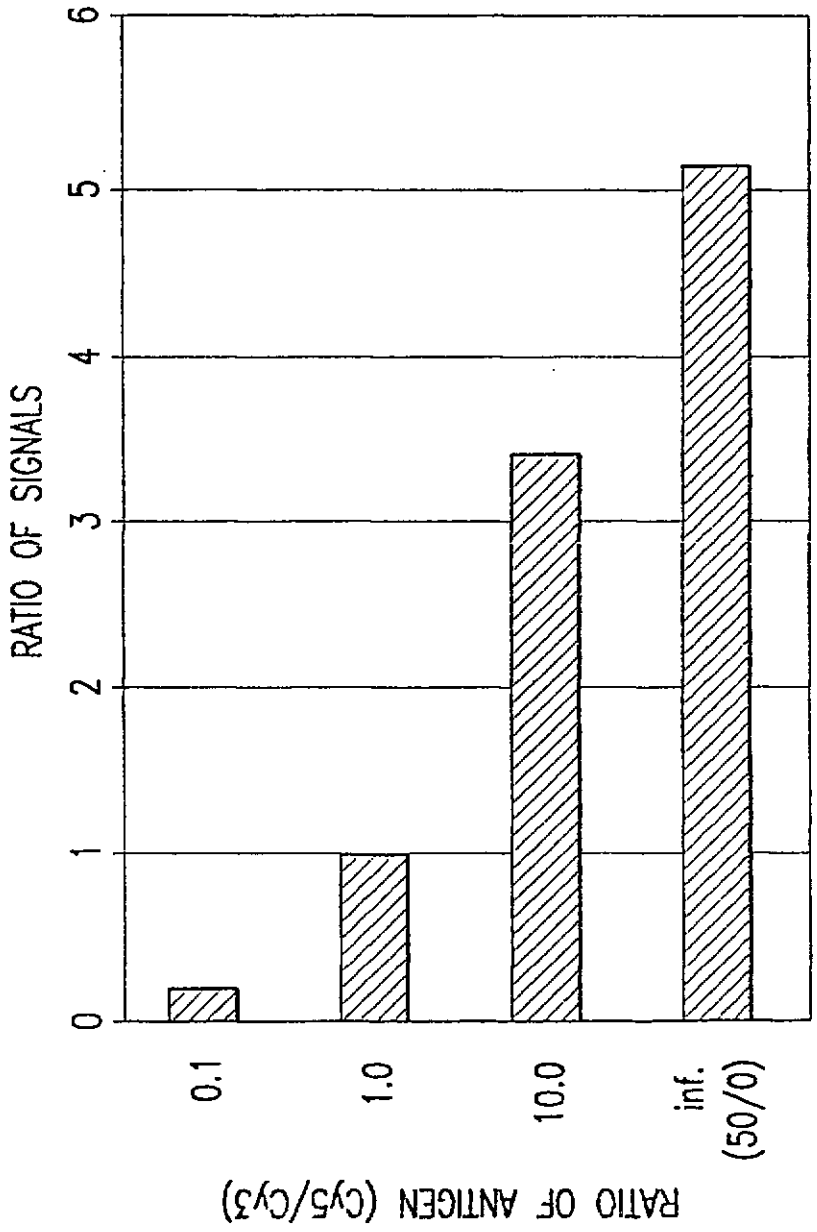
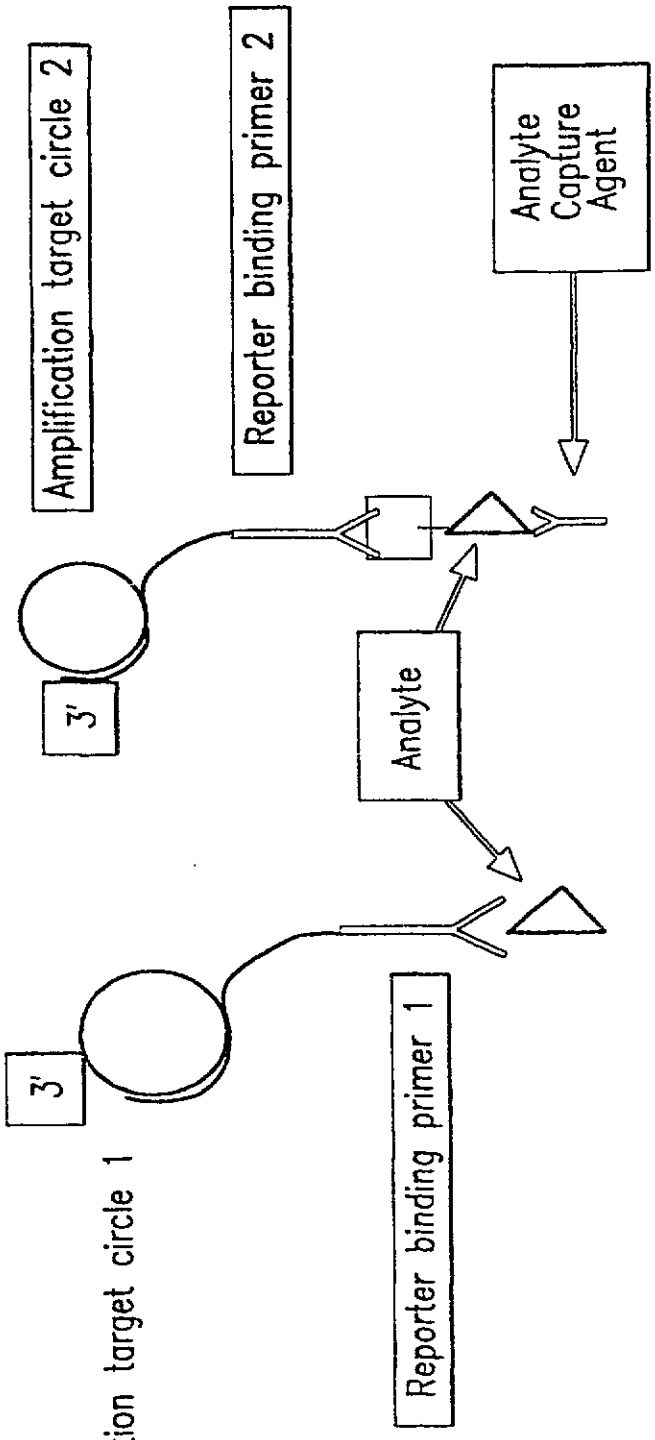
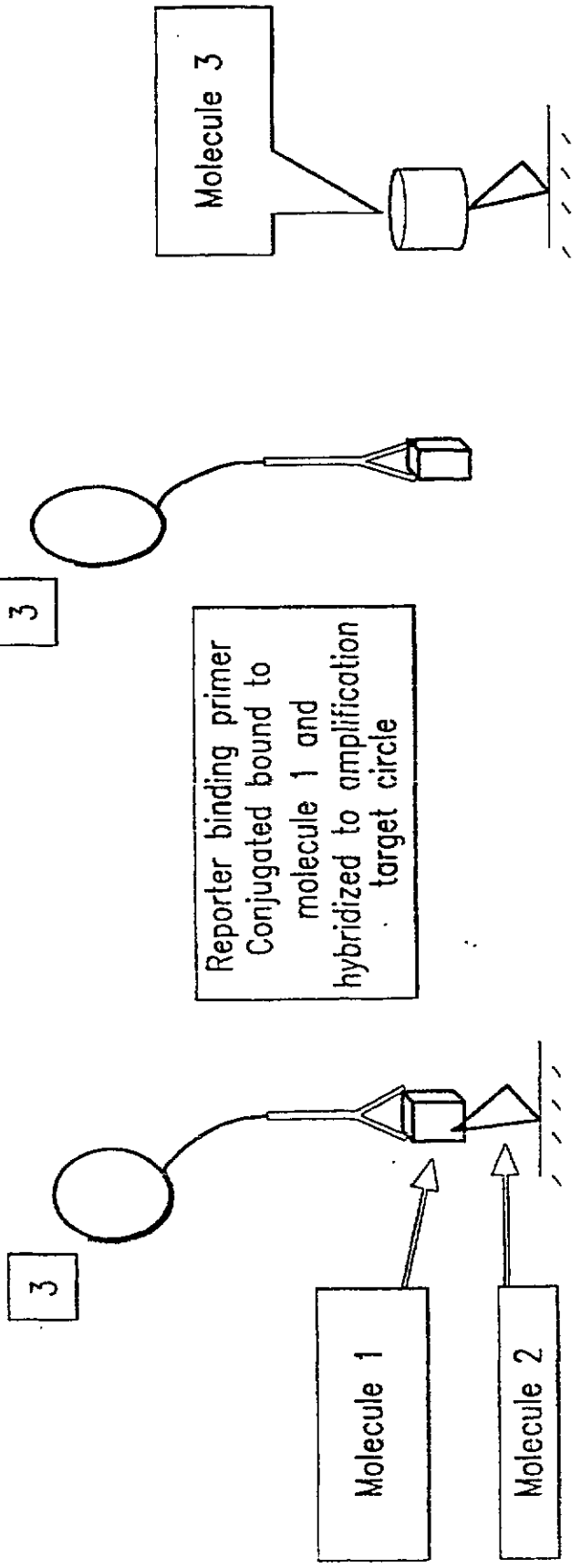

RATIO OF SIGNALS
0
1
2
3
4
5
6
0.1
1.0
10.0
inf.
(50/0)
RATIO OF ANTIGEN (Cy5/Cy3)

FIG.12



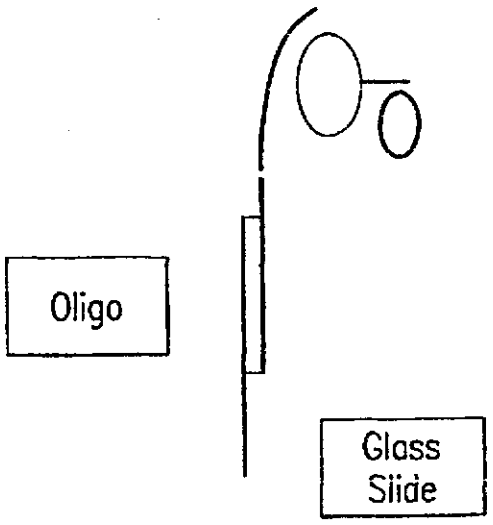
- Anchor analyte capture agent (protein, antibody or other interactant)
- Incubate with sample containing analyte
- Incubate with reporter binding primer 1 (to detect unmodified) and reporter binding primer 2 (to detect modified, e.g. phosphorylated) proteins.

FIG.13



- Anchor molecule 2 (e.g., protein)
- Incubate arrays with molecule 1
- Optionally, incubate with competing molecule 3 (e.g. protein or small molecule)

FIG.14



- Create mRNA–protein fusion library by in vitro translation
- Capture by hybridization on positional DNA array
- Incubate with RCA platform conjugated to ligands that interact with protein
- Perform RCA signal amplification

FIG.15

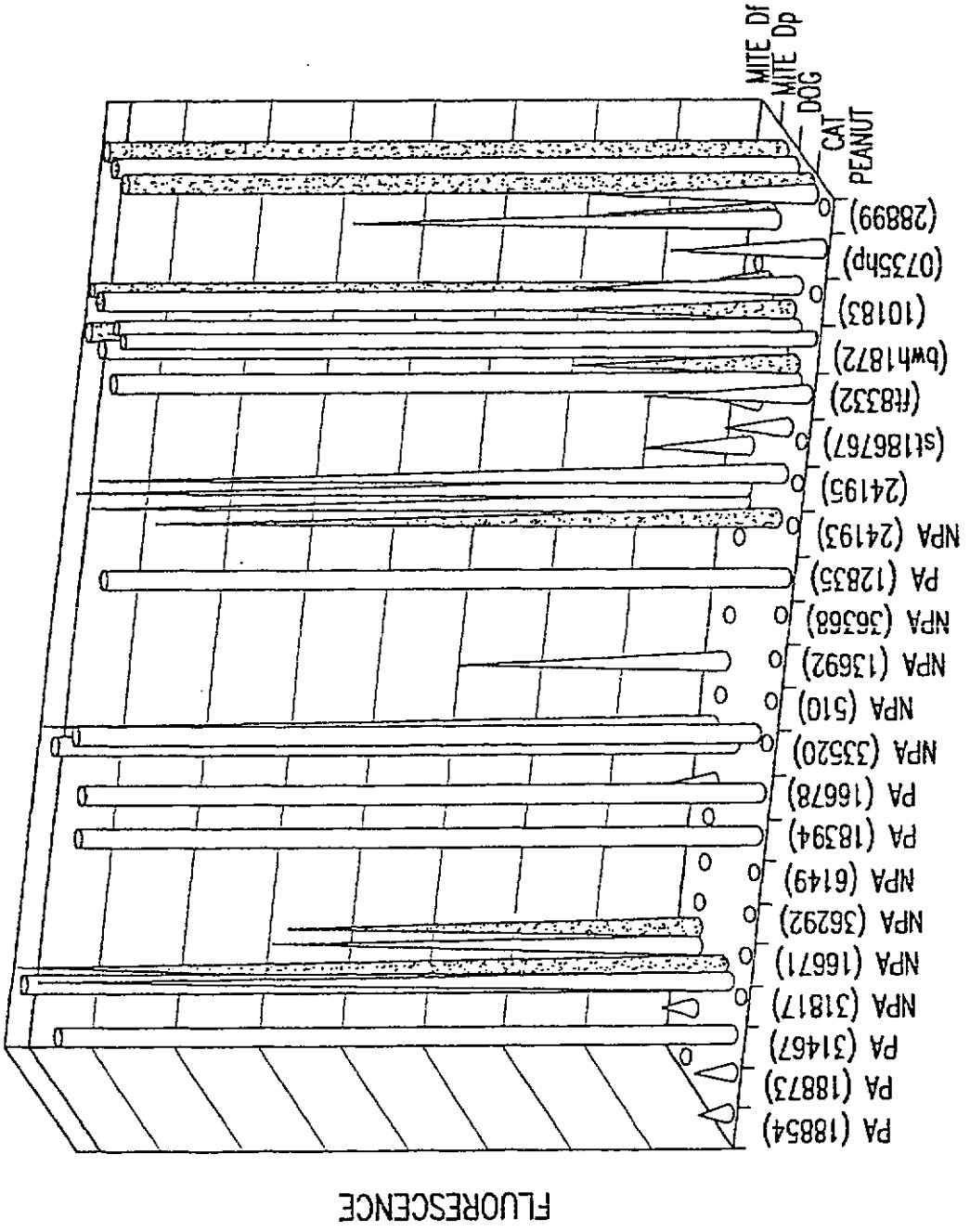

MITE Df
MITE Dp
DOG
CAT
PEANUT
(28899)
(0735hp)
(10183)
(bwh1872)
(ft8332)
(st186767)
(24195)
NPA (24193)
PA (12835)
NPA (36568)
NPA (13692)
NPA (510)
NPA (33520)
PA (16678)
PA (18394)
NPA (6149)
NPA (36292)
NPA (16671)
NPA (31817)
PA (31467)
PA (18873)
PA (18854)
FLUORESCENCE

FIG.16

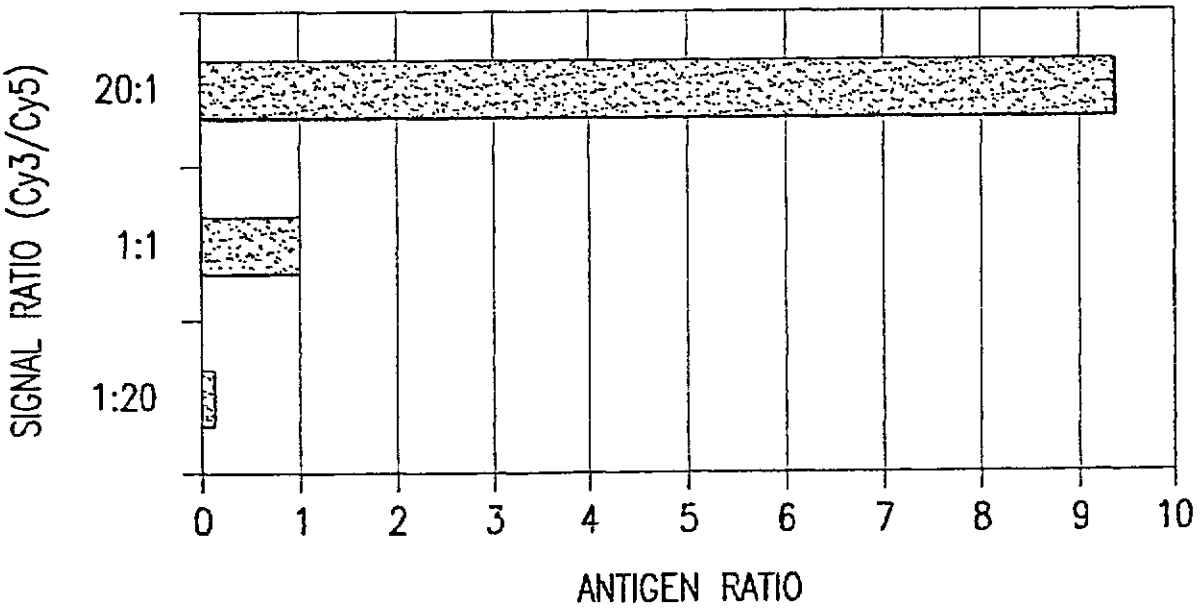


FIG.17

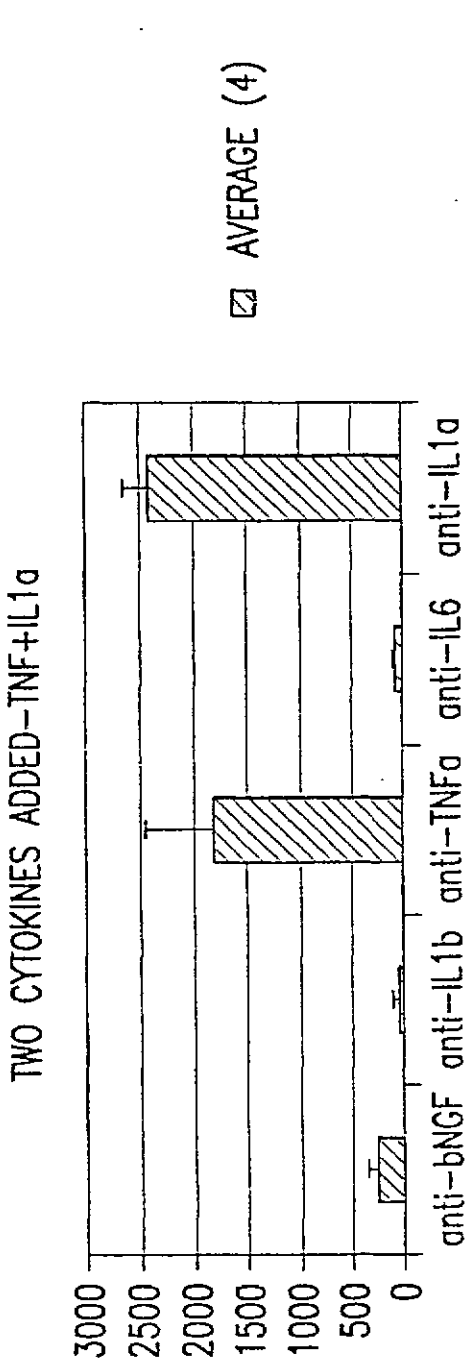


FIG.18A

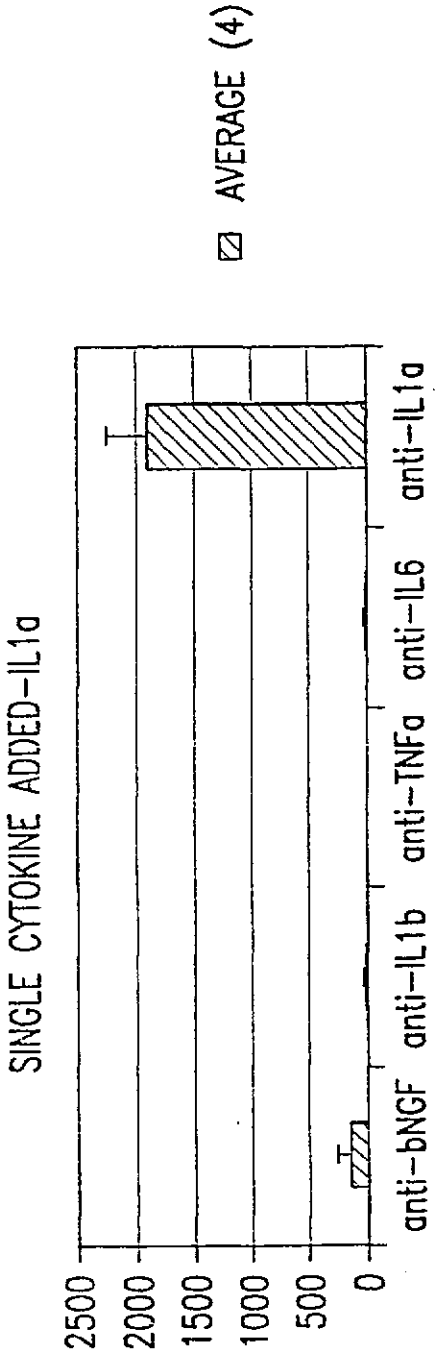


FIG.18B