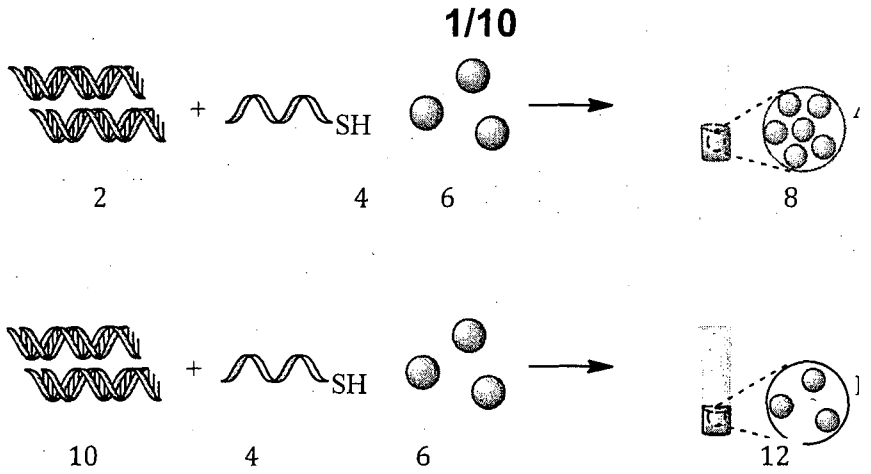


Figure 1

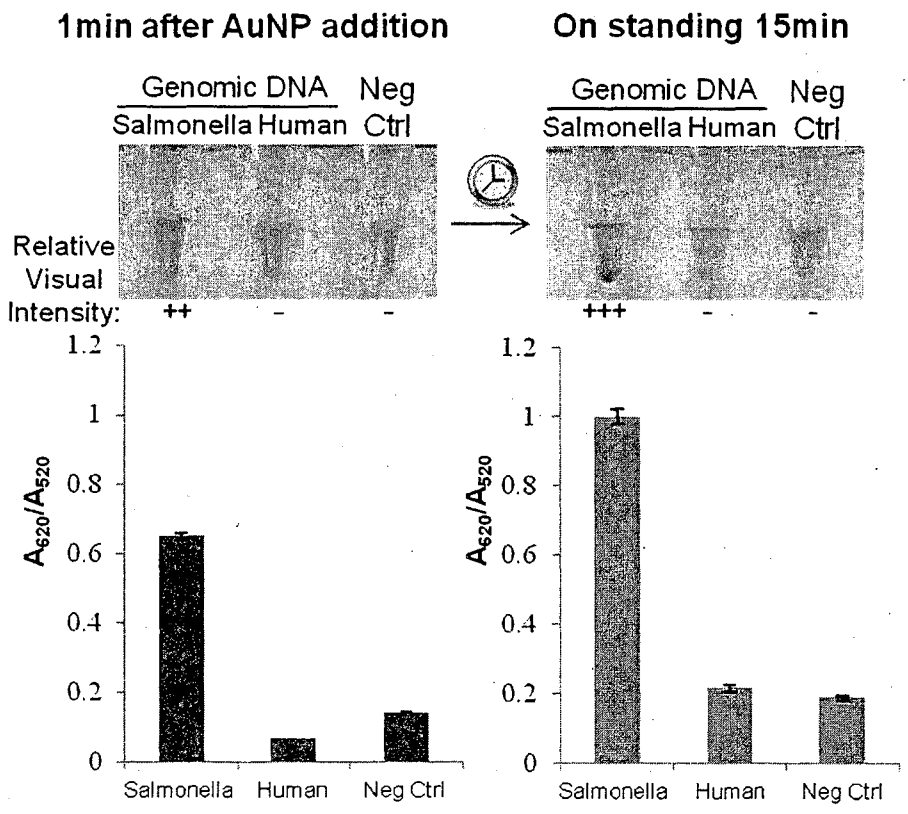
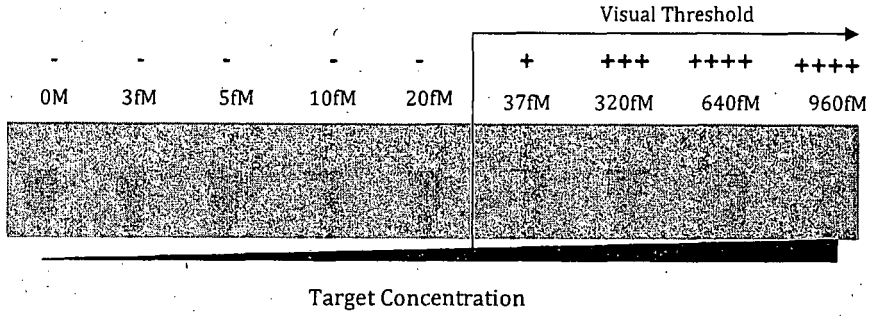


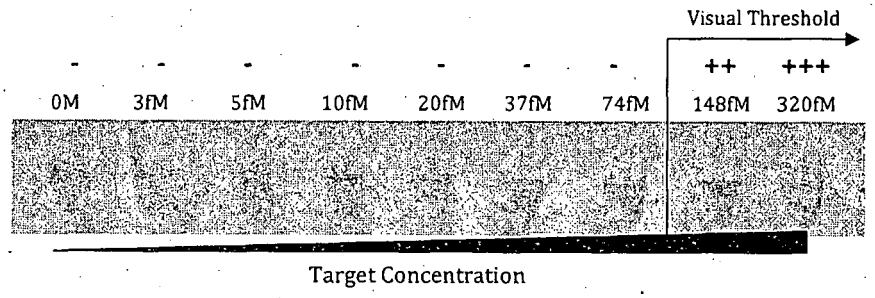
Figure 2

Figure 3

A


Visual Threshold
- - - - - + +++ ++++ ++++
0M 3fM 5fM 10fM 20fM 37fM 320fM 640fM 960fM
Target Concentration

B.


Visual Threshold
- - - - - - - ++ +++
0M 3fM 5fM 10fM 20fM 37fM 74fM 148fM 320fM
Target Concentration

C.

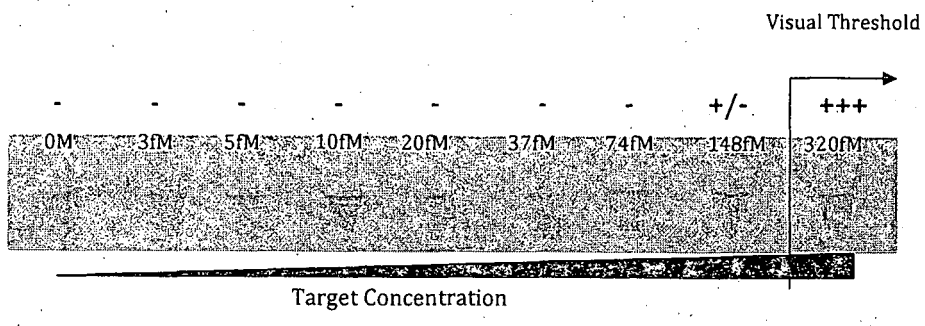
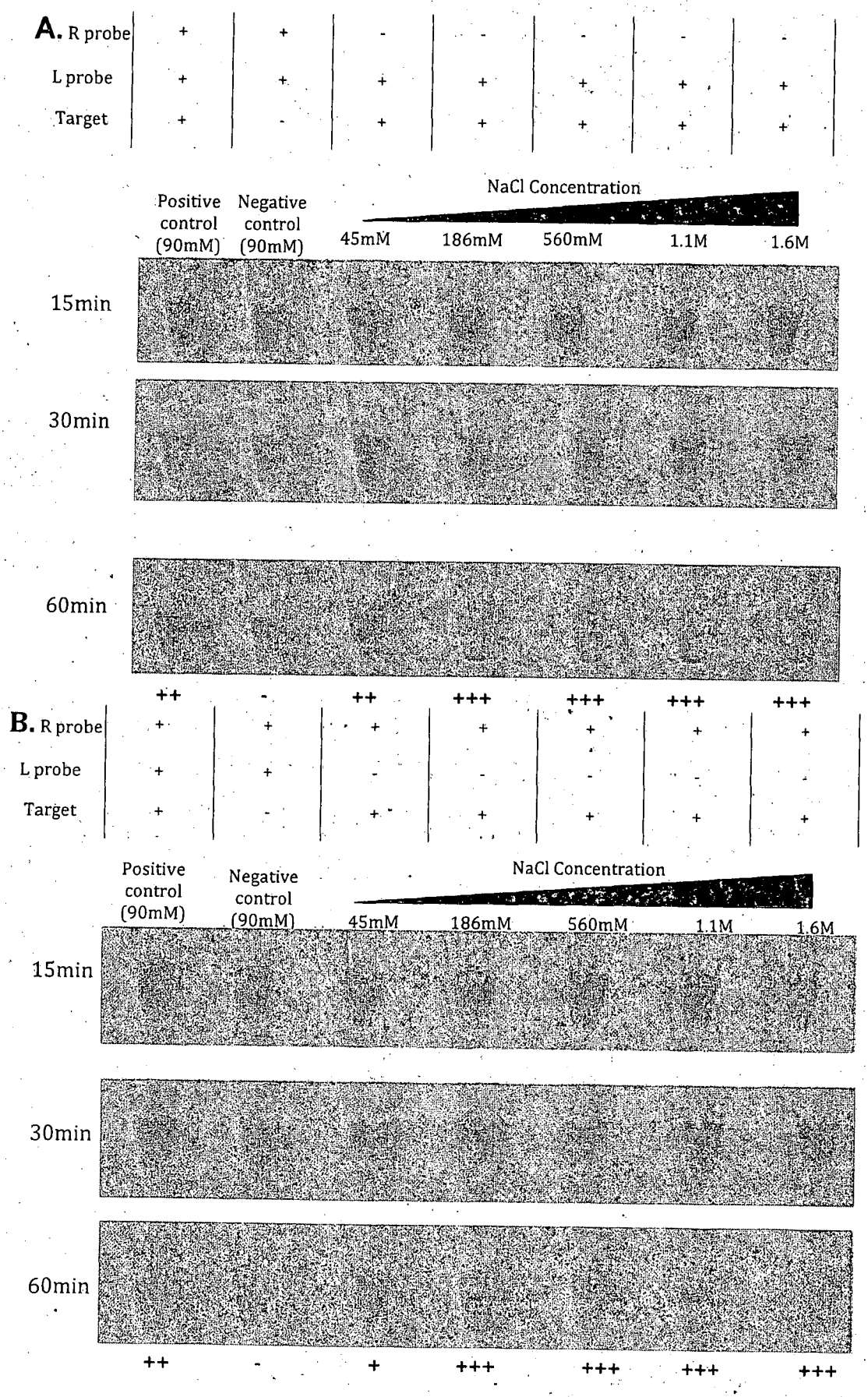

Visual Threshold
- - - - - - - +/- +++
0M 3fM 5fM 10fM 20fM 37fM 74fM 148fM 320fM
Target Concentration

Figure 4


A. R probe
L probe
Target
Positive control (90mM)
Negative control (90mM)
NaCl Concentration
45mM
186mM
560mM
1.1M
1.6M
15min
30min
60min
++
-
++
+++
+++
+++
+++
B. R probe
L probe
Target
Positive control (90mM)
Negative control (90mM)
NaCl Concentration
45mM
186mM
560mM
1.1M
1.6M
15min
30min
60min
++
-
+
+++
+++
+++
+++

C.

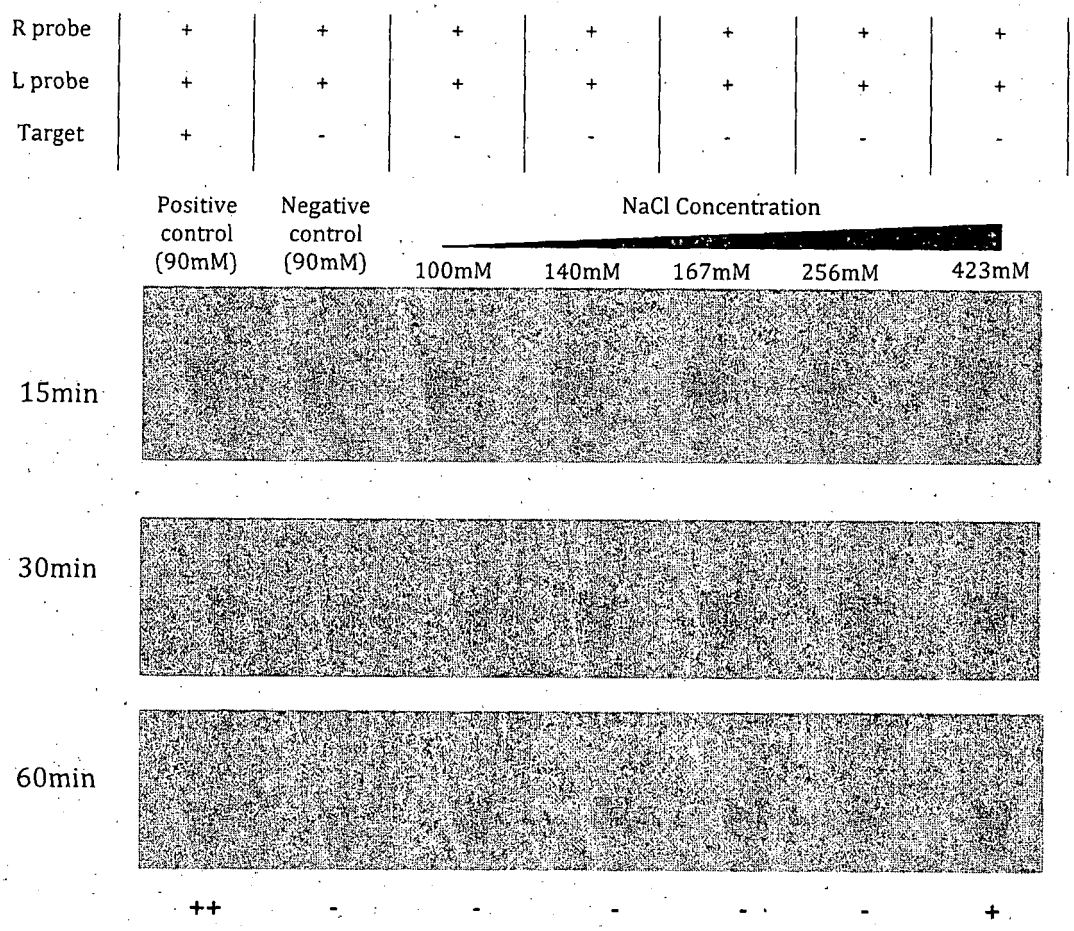
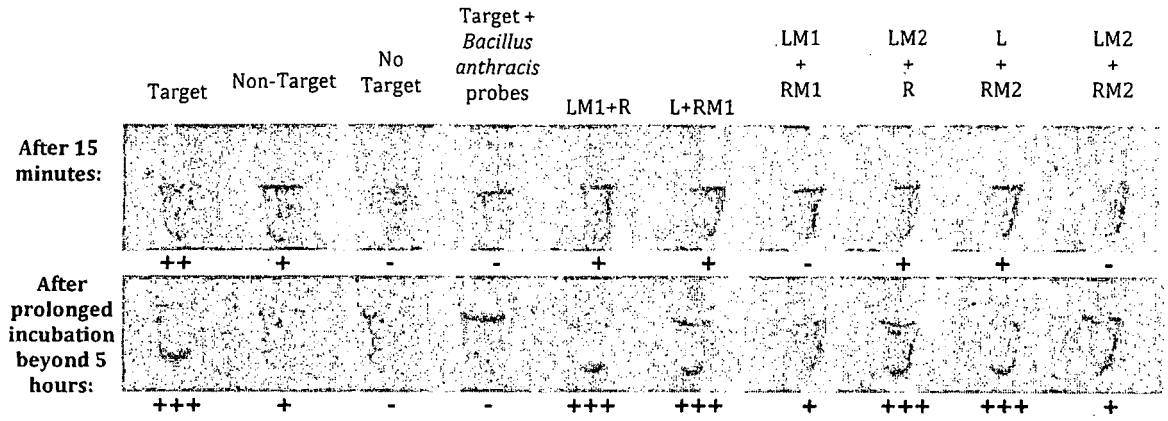
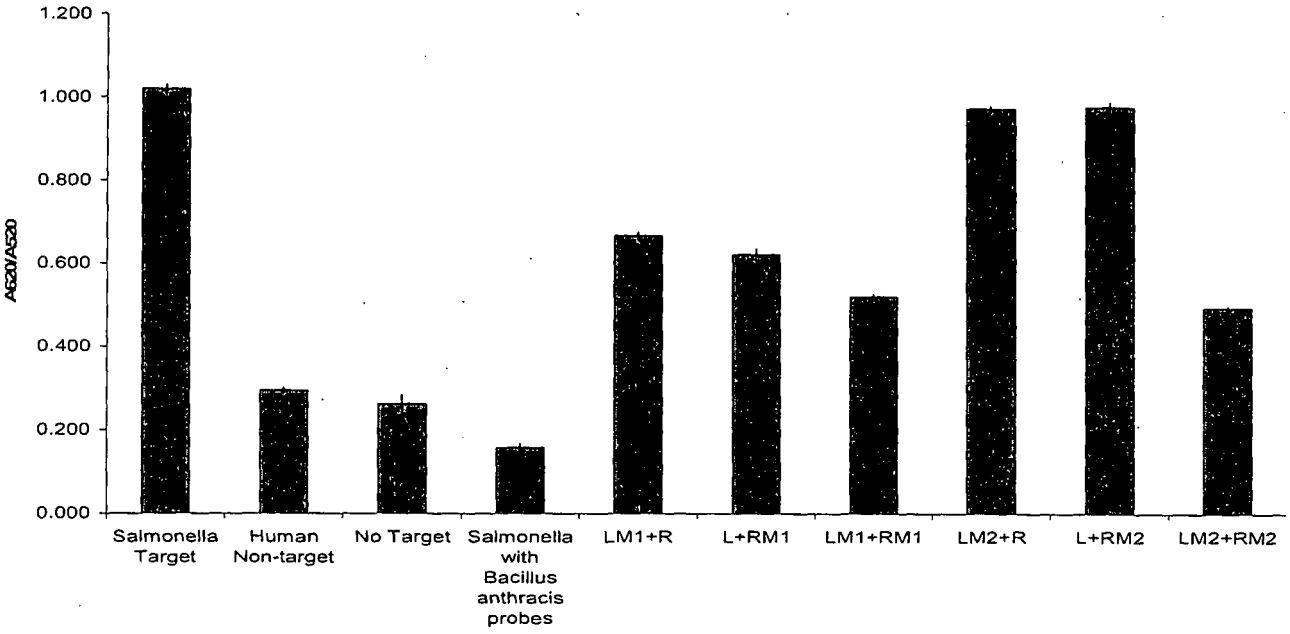

R probe
L probe
Target
+ + + + + + +
+ + + + + + +
+ - - - - - -
Positive control (90mM)
Negative control (90mM)
NaCl Concentration
100mM
140mM
167mM
256mM
423mM
15min
30min
60min
++ - - - - - +

Figure 4.

A

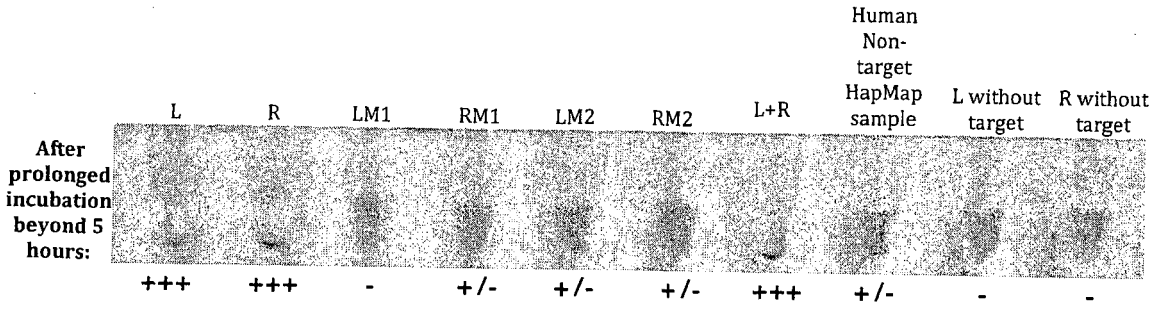

Target
Non-Target
No Target
Target + Bacillus anthracis probes
LM1+R
L+RM1
LM1 + RM1
LM2 + R
L + RM2
LM2 + RM2
After 15 minutes:
++ + - - + + - + + -
After prolonged incubation beyond 5 hours:
+++ + - - +++ +++ + +++ +++ +

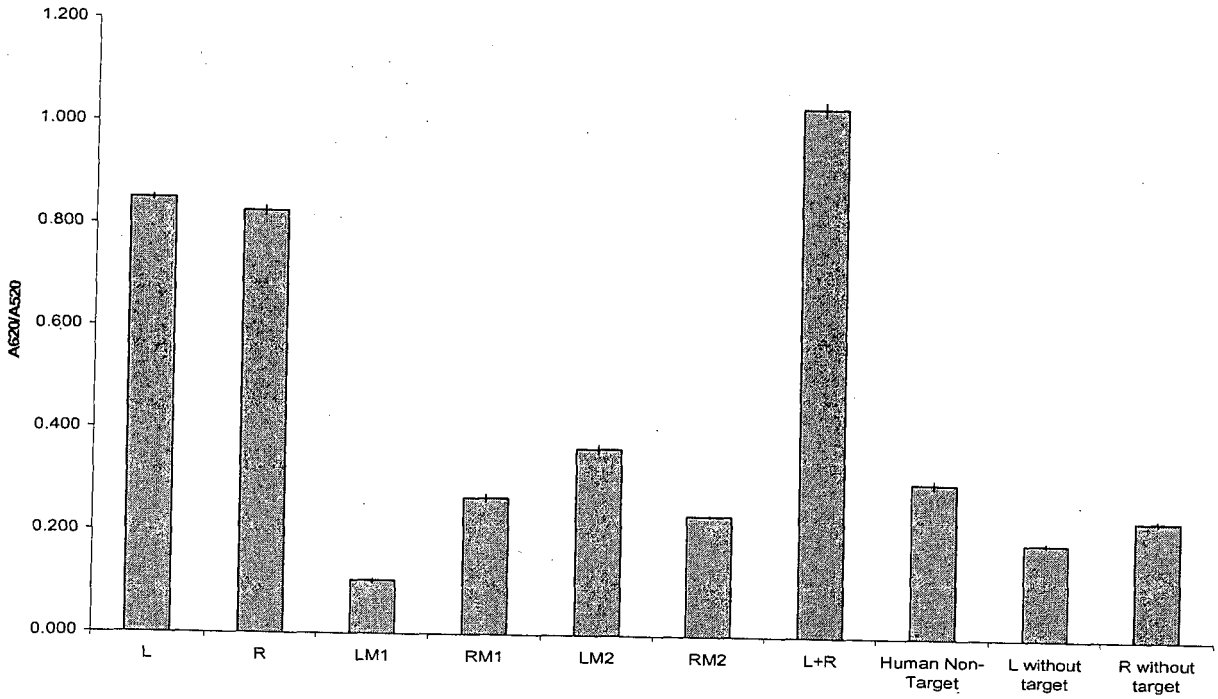

1.200
1.000
0.800
0.600
0.400
0.200
0.000
A630/A520
Salmonella Target
Human Non-target
No Target
Salmonella with Bacillus anthracis probes
LM1+R
L+RM1
LM1+RM1
LM2+R
L+RM2
LM2+RM2

B

Figure 5.

A


L
R
LM1
RM1
LM2
RM2
L+R
Human Non-target HapMap sample
L without target
R without target
After prolonged incubation beyond 5 hours:
+++
+++
-
+/-
+/-
+/-
+++
+/-
-
-


1.200
1.000
0.800
0.600
0.400
0.200
0.000
A620/A520
L
R
LM1
RM1
LM2
RM2
L+R
Human Non-Target
L without target
R without target

B

Figure 6.

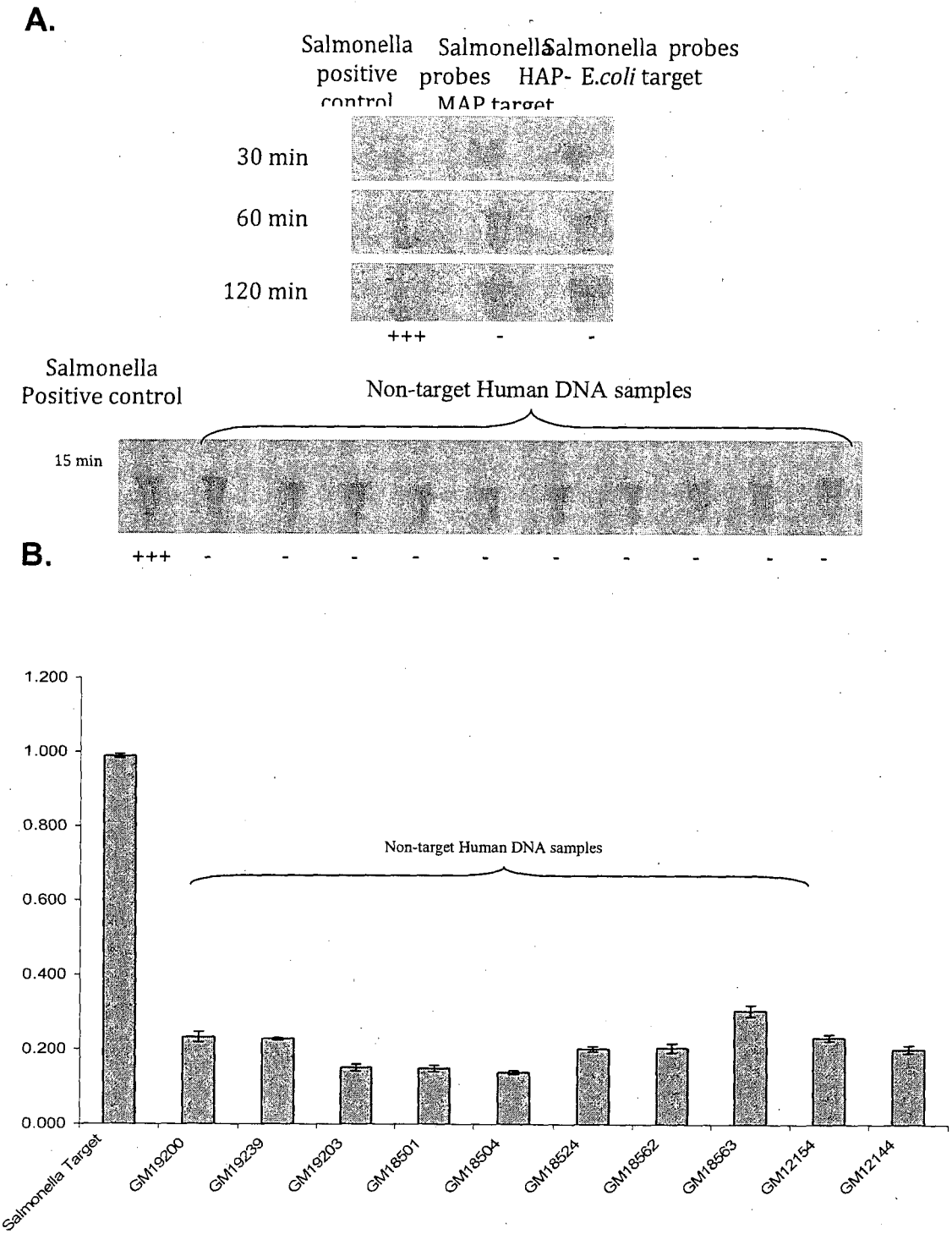

A.
Salmonella positive control
Salmonella probes MAP target
Salmonella probes HAP- E.coli target
30 min
60 min
120 min
+++ - -
Salmonella Positive control
Non-target Human DNA samples
15 min
B.
+++ - - - - - - - - - -
A620/A520
1.200
1.000
0.800
0.600
0.400
0.200
0.000
Non-target Human DNA samples
Salmonella Target
GM19200
GM19239
GM19203
GM18501
GM18504
GM18524
GM18562
GM18563
GM12154
GM12144

Figure 7.

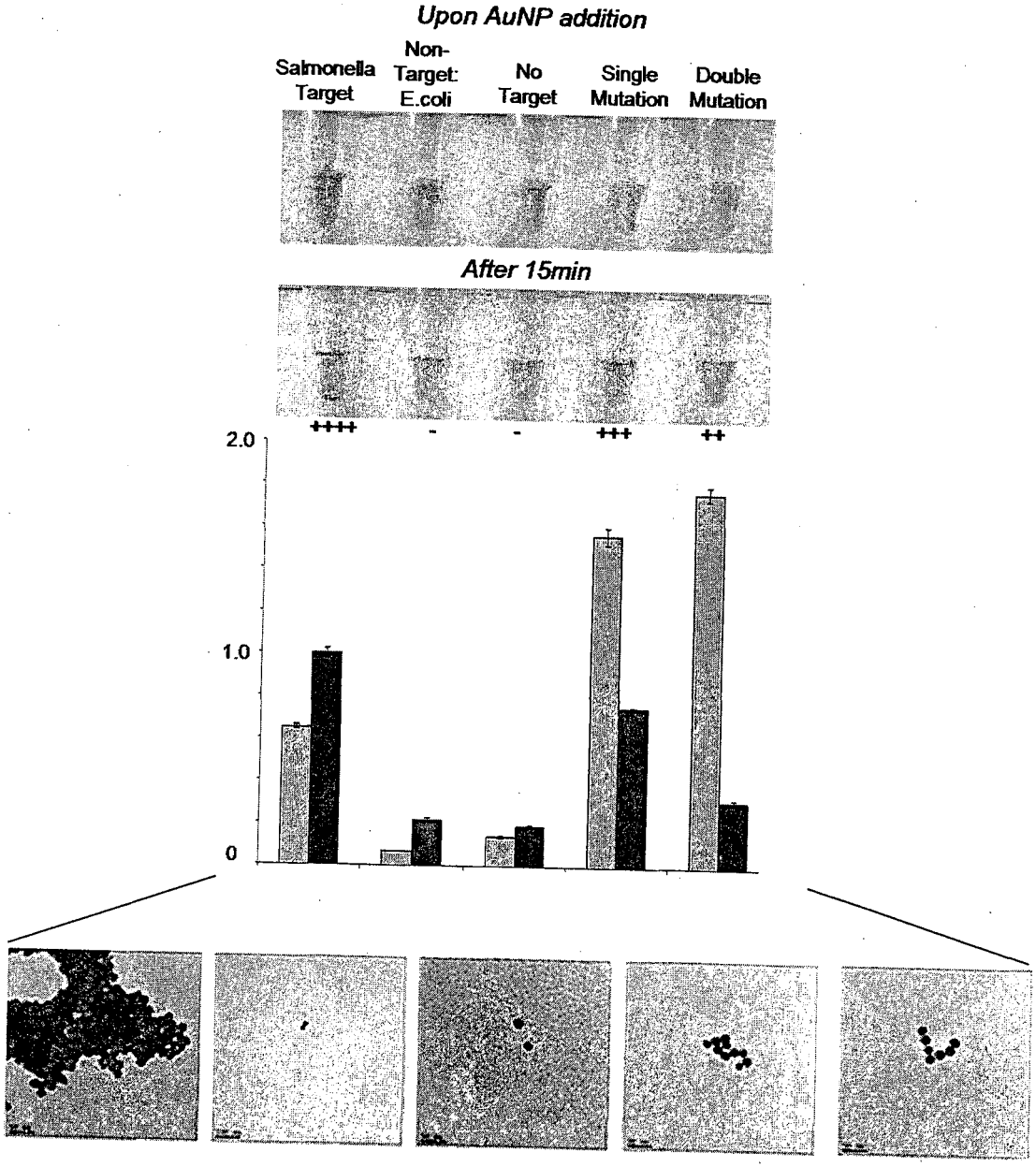
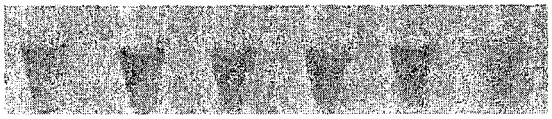

Upon AuNP addition
Salmonella Target
Non-Target: E.coli
No Target
Single Mutation
Double Mutation
After 15min
++++
-
-
+++
++
2.0
1.0
0

Figure 8.

Salmonella Thiolated probes	-	-	-	+	+	+
Salmonella Genomic DNA	-	-	+	-	-	+
Human Genomic DNA	-	+	-	-	+	-
E.coli Thiolated Probes	+	+	+	-	-	-
E.coli Genomic DNA	+	-	-	+	-	-
Gold Nanoparticles (15nm)	+	+	+	+	+	+



Visual Signal (A_{620}/A_{520}) ++++ - - - - +++

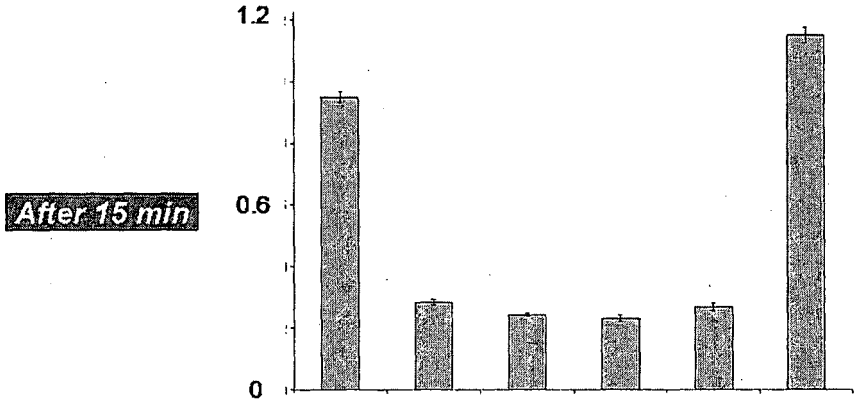


Figure 9

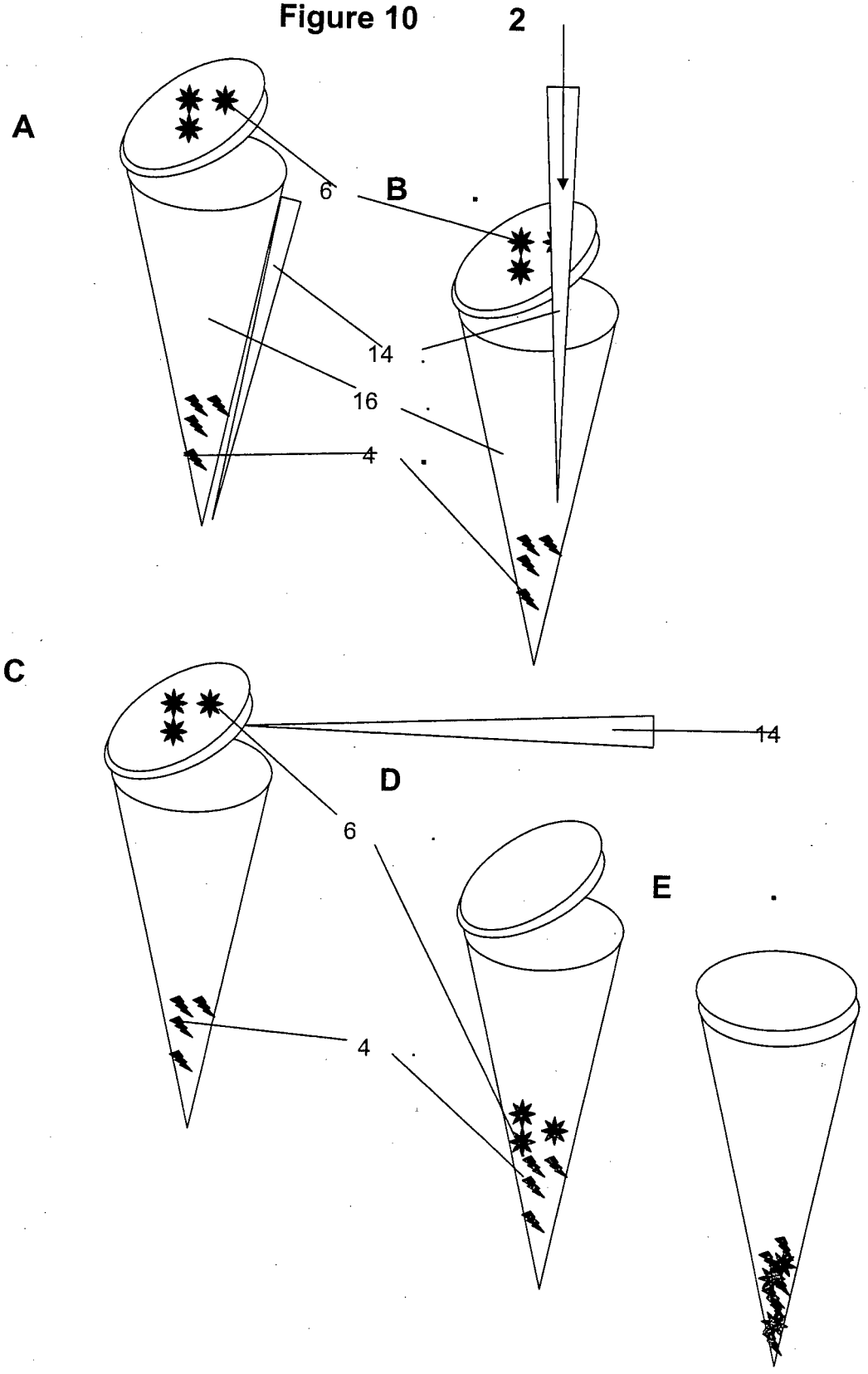



Figure 10