FIG. 1

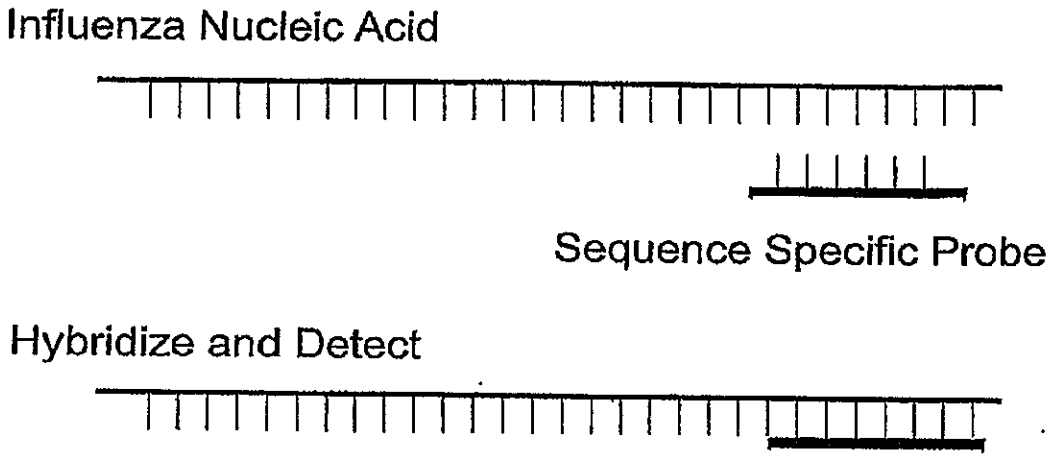

Influenza Nucleic Acid
Sequence Specific Probe
Hybridize and Detect

FIG. 2

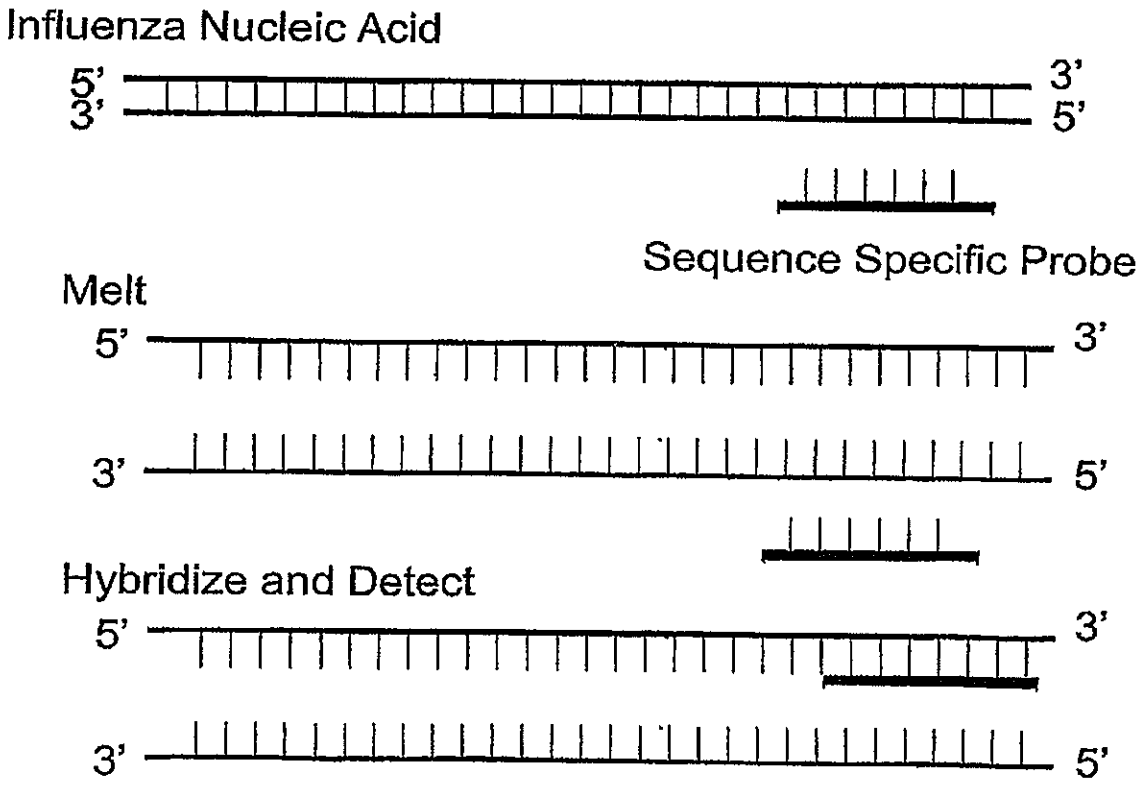

Influenza Nucleic Acid
5'
3'
3'
5'
Sequence Specific Probe
Melt
5'
3'
3'
5'
Hybridize and Detect
5'
3'
3'
5'

FIG. 3

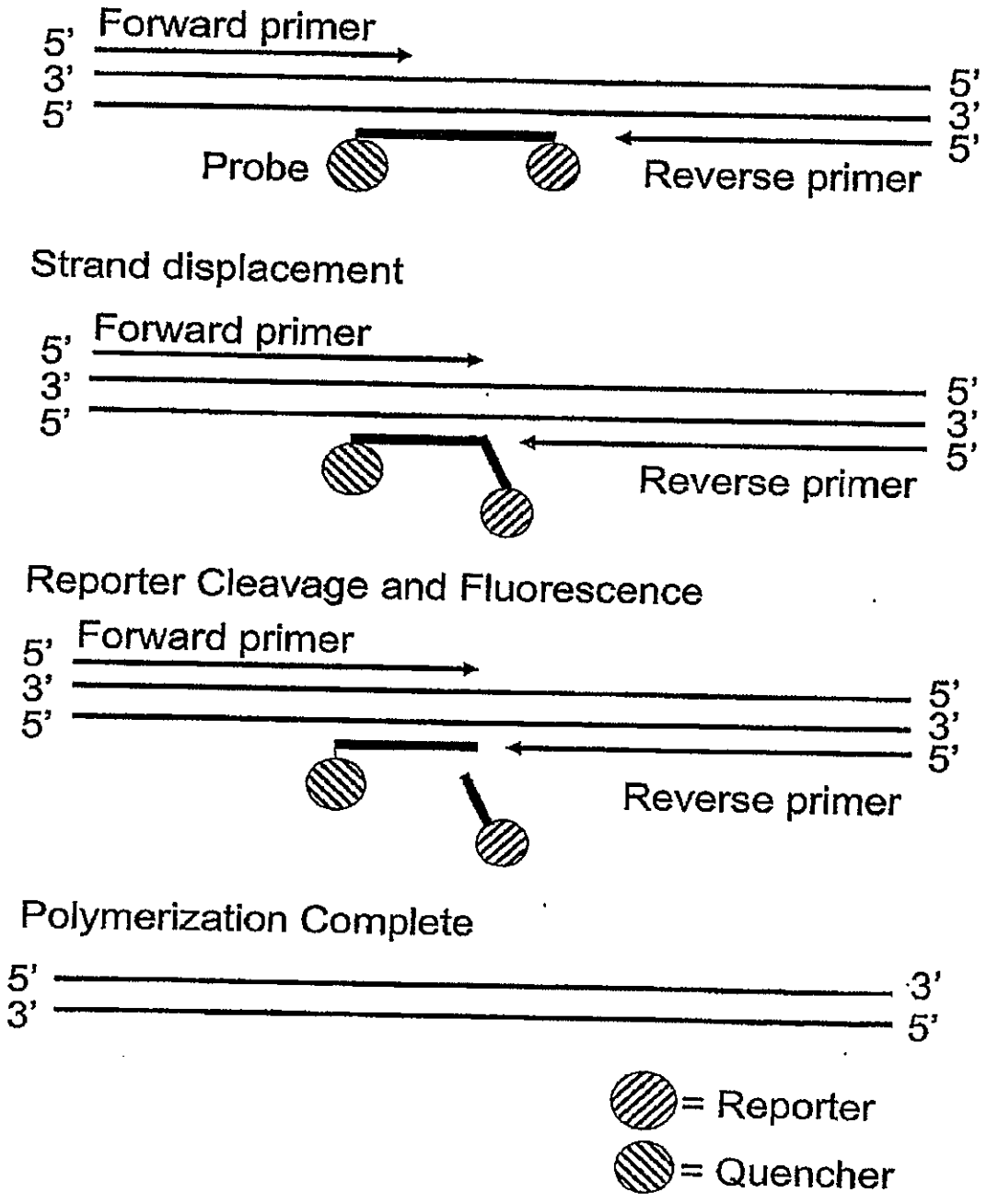

Polymerization
Forward primer
5'
3'
5'
5'
3'
5'
Probe
Reverse primer
Strand displacement
Forward primer
5'
3'
5'
5'
3'
5'
Reverse primer
Reporter Cleavage and Fluorescence
Forward primer
5'
3'
5'
5'
3'
5'
Reverse primer
Polymerization Complete
5'
3'
3'
5'
= Reporter
= Quencher

FIG. 4

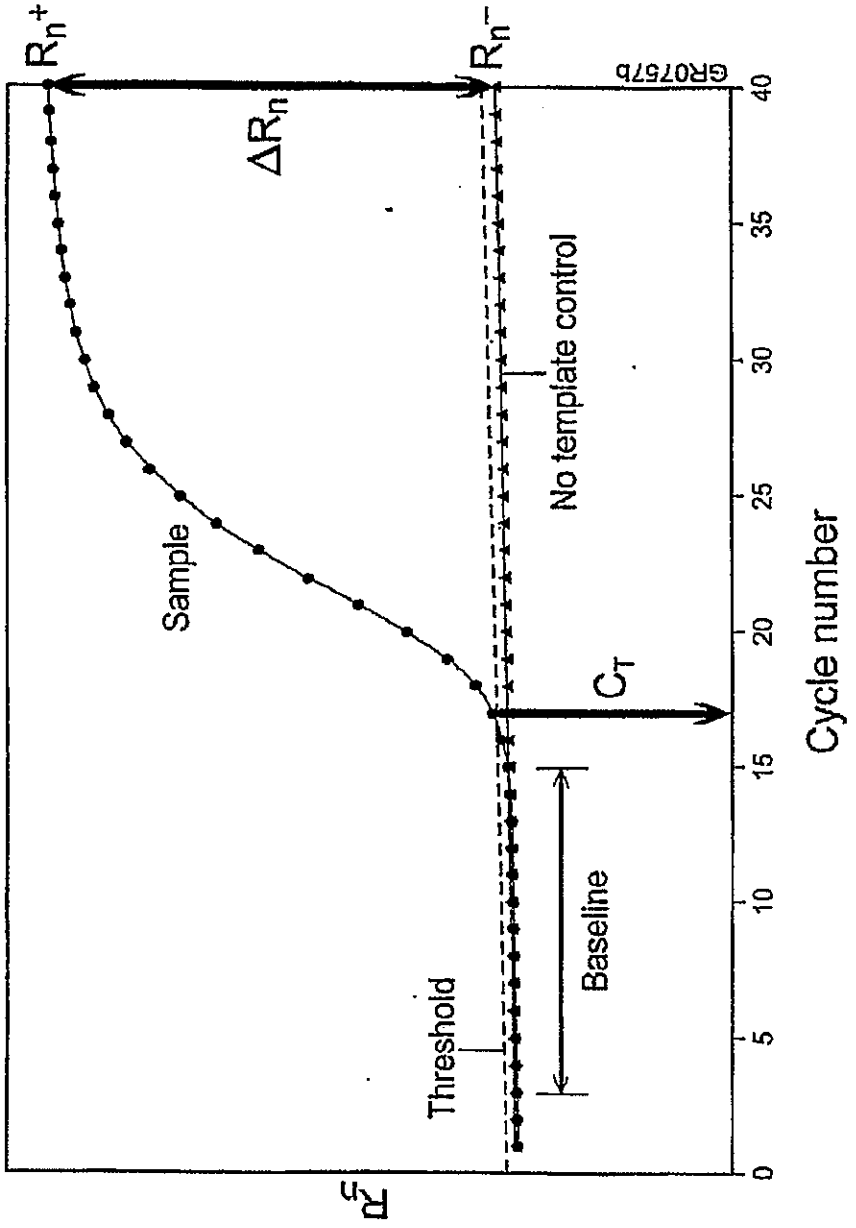

R_n^+
R_n^-
ΔR_n
GR07576
Sample
No template control
C_T
Threshold
Baseline
R_n
Cycle number
0
5
10
15
20
25
30
35
40

FIG. 5A

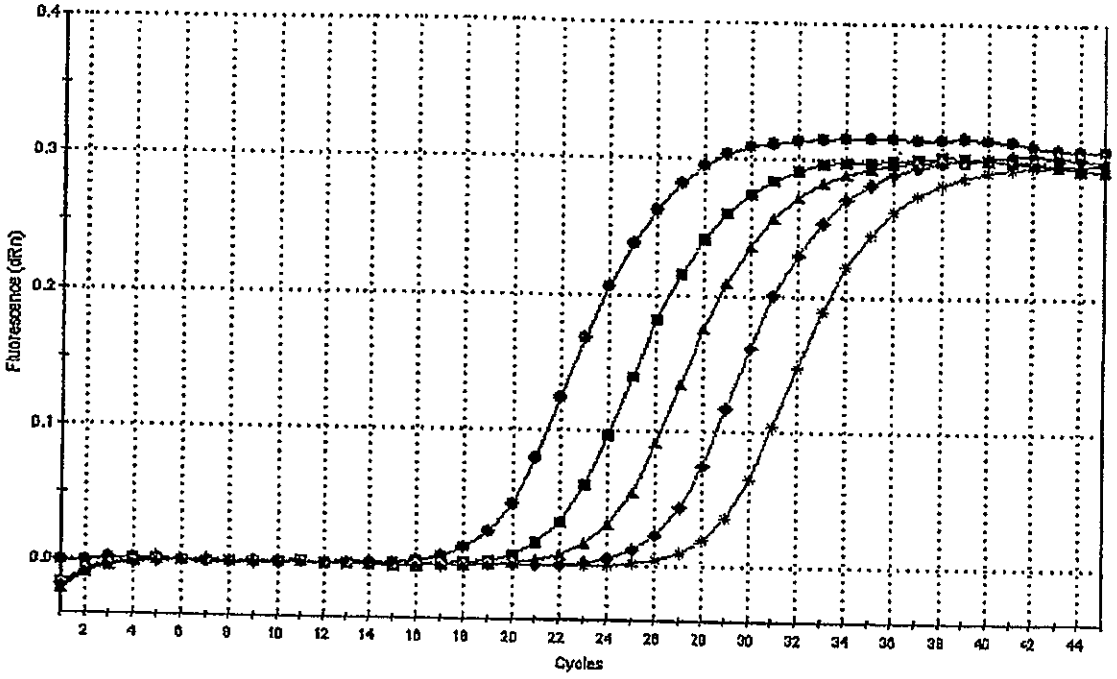


FIG. 5B

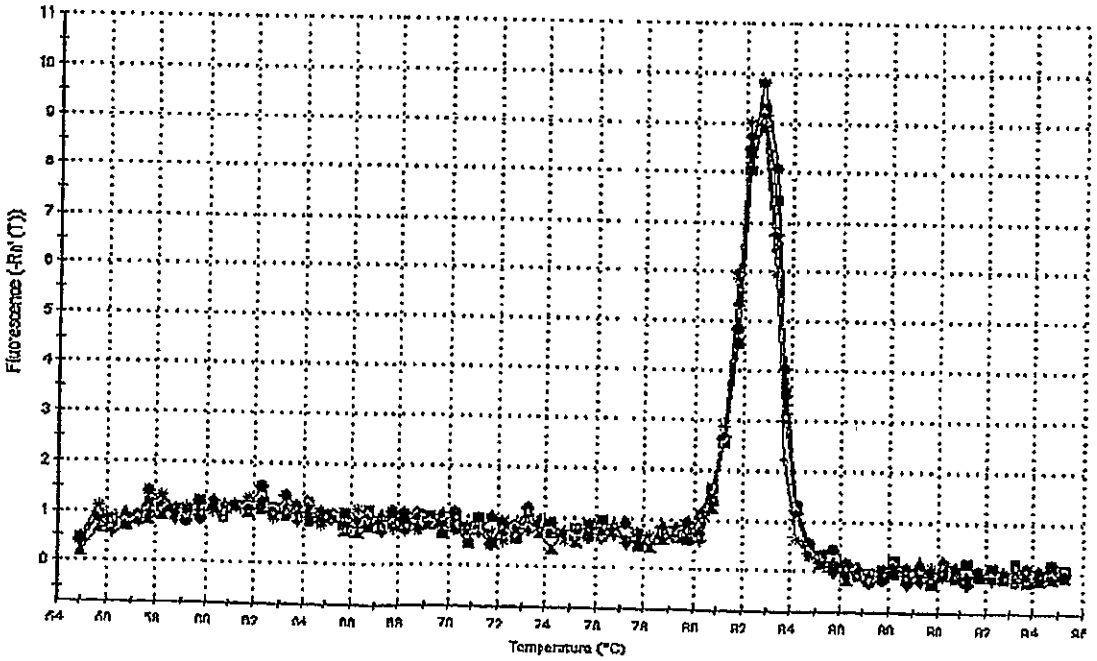


FIG. 5C

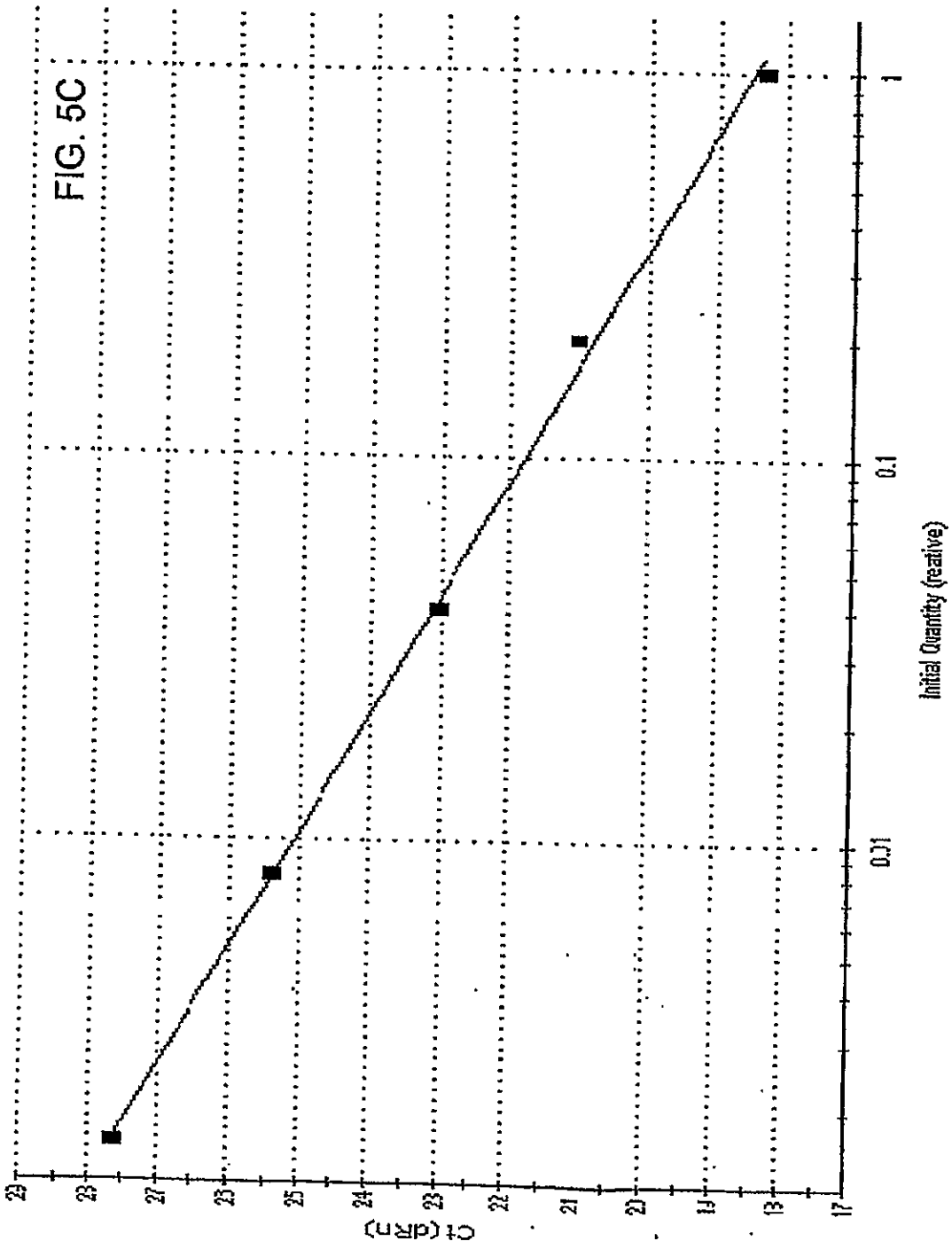

Ct (dRn)
29
28
27
26
25
24
23
22
21
20
19
18
17
0.01
0.1
1
Initial Quantity (relative)

FIG. 6A

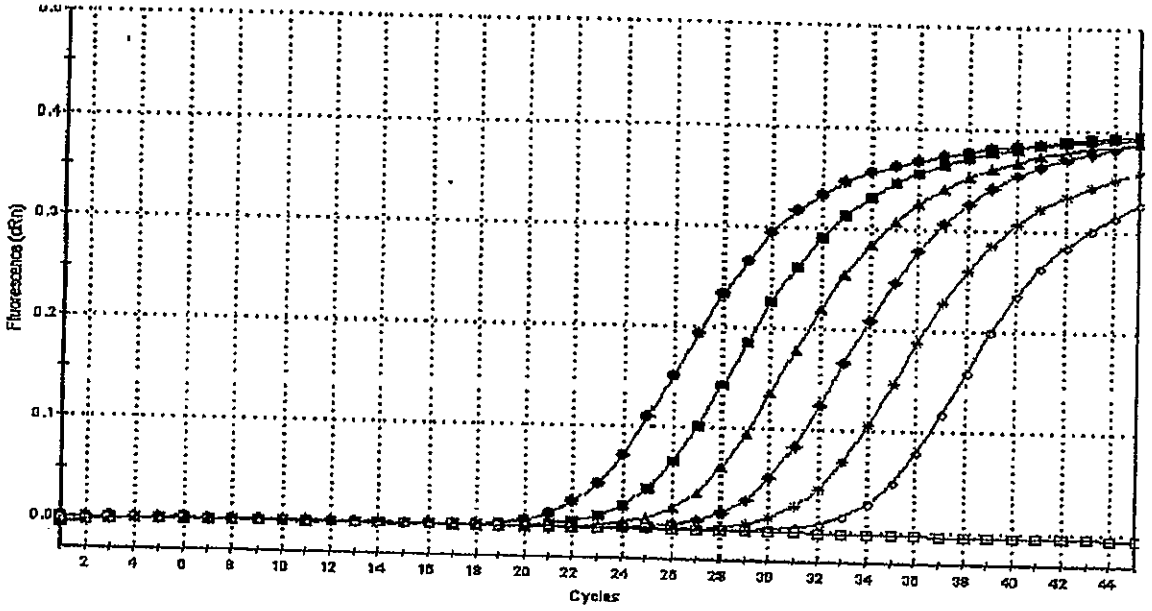

Fluorescence (dRn)
0.4
0.3
0.2
0.1
0.0
2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44
Cycles

FIG. 6B

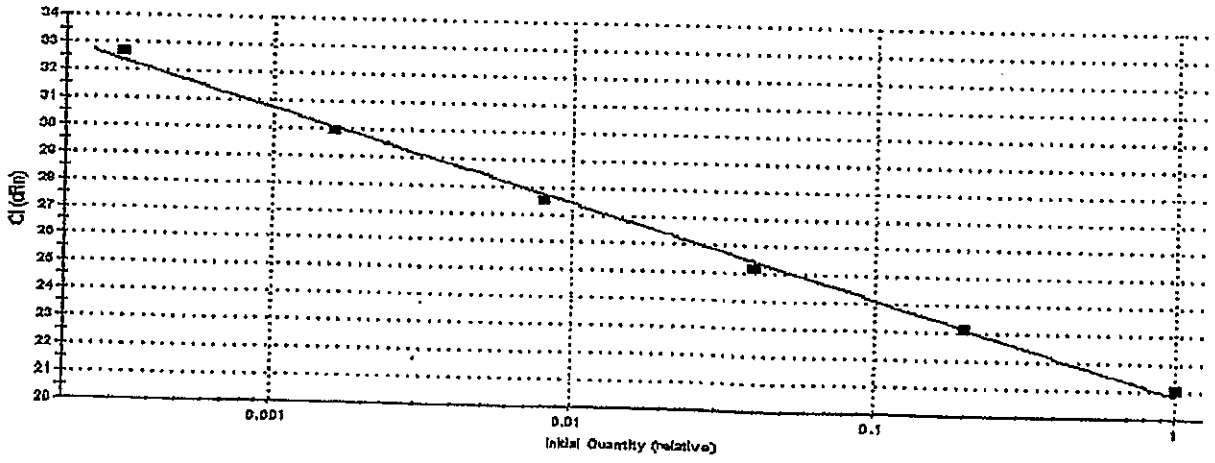

Ct (dRn)
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
0.001
0.01
0.1
1
Initial Quantity (relative)

FIG. 7

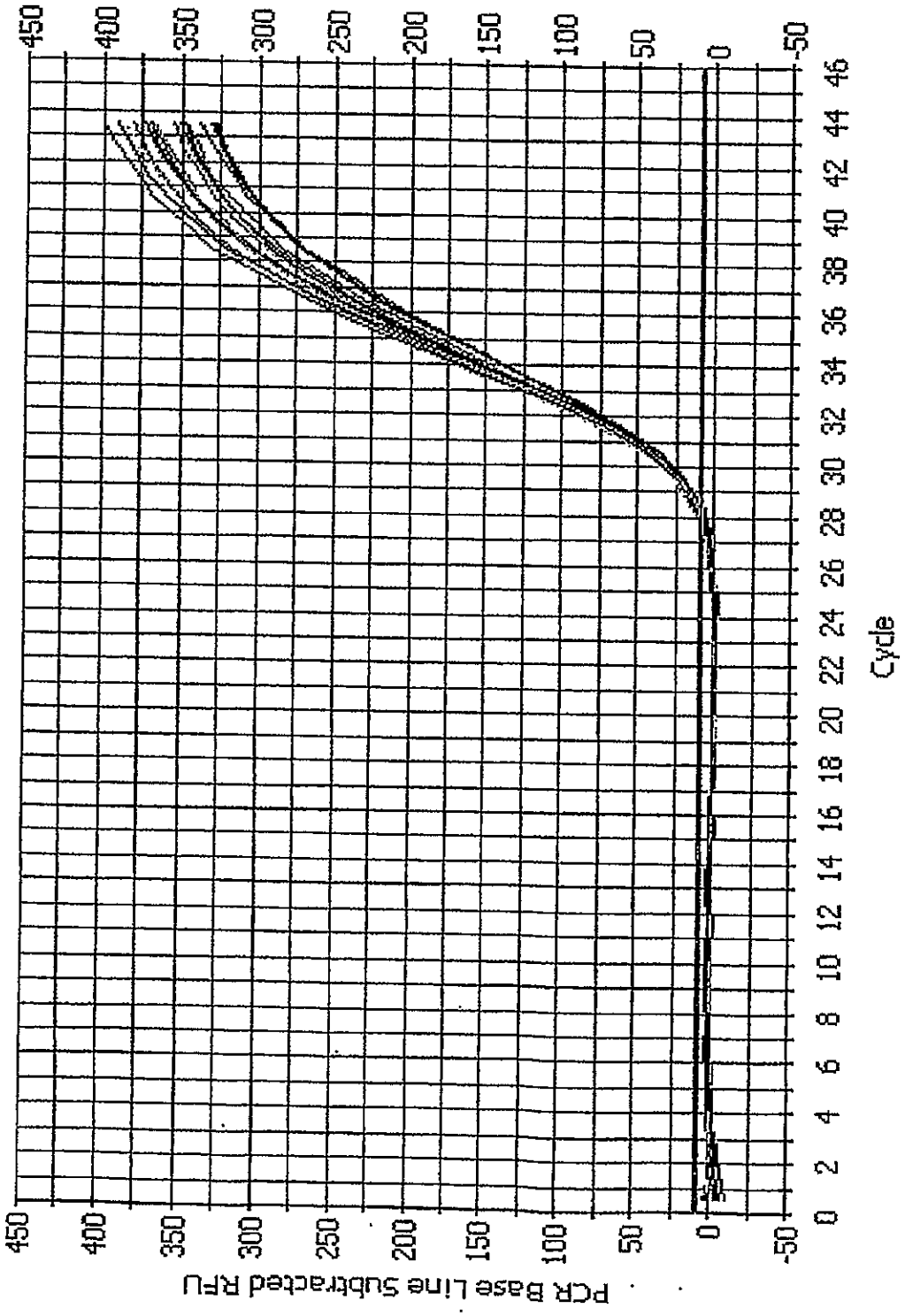

PCR Base Line Subtracted RFU
450
400
350
300
250
200
150
100
50
0
-50
Cycle
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46

FIG. 8A

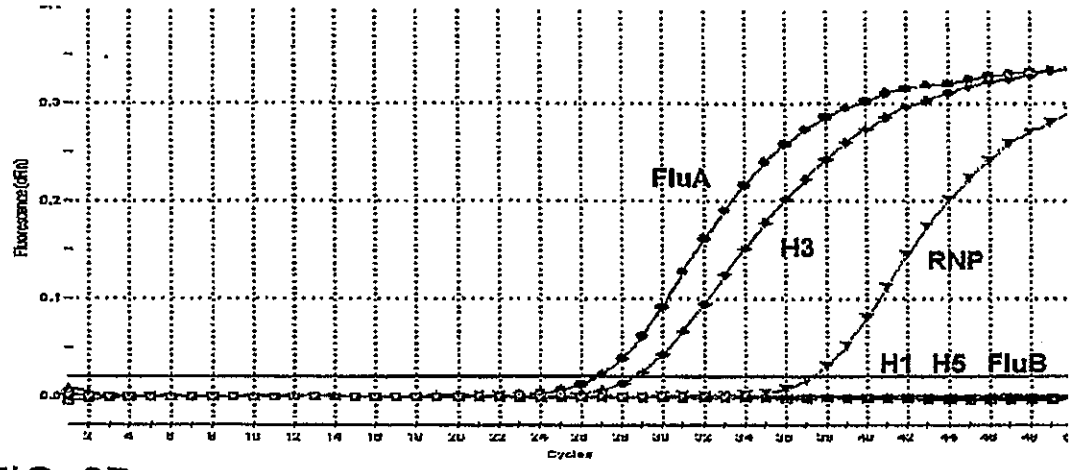


FIG. 8B

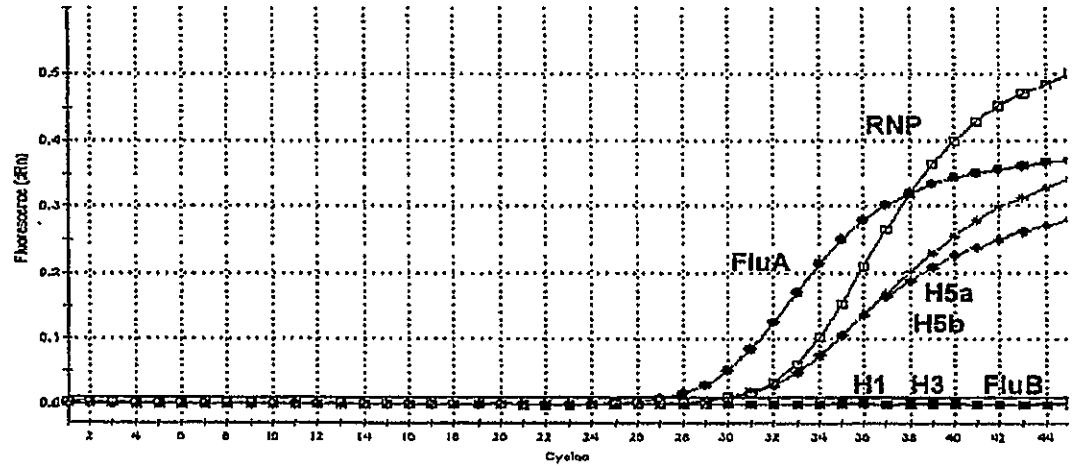
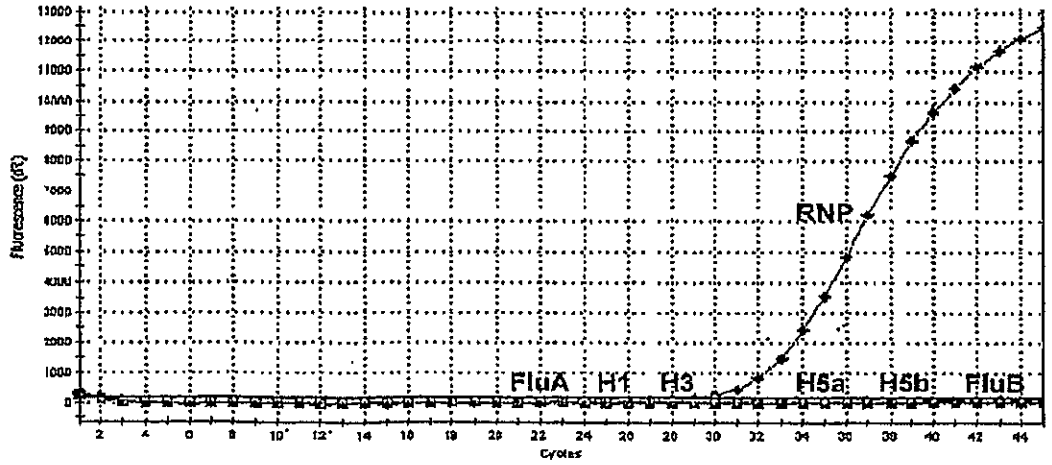


FIG. 8C



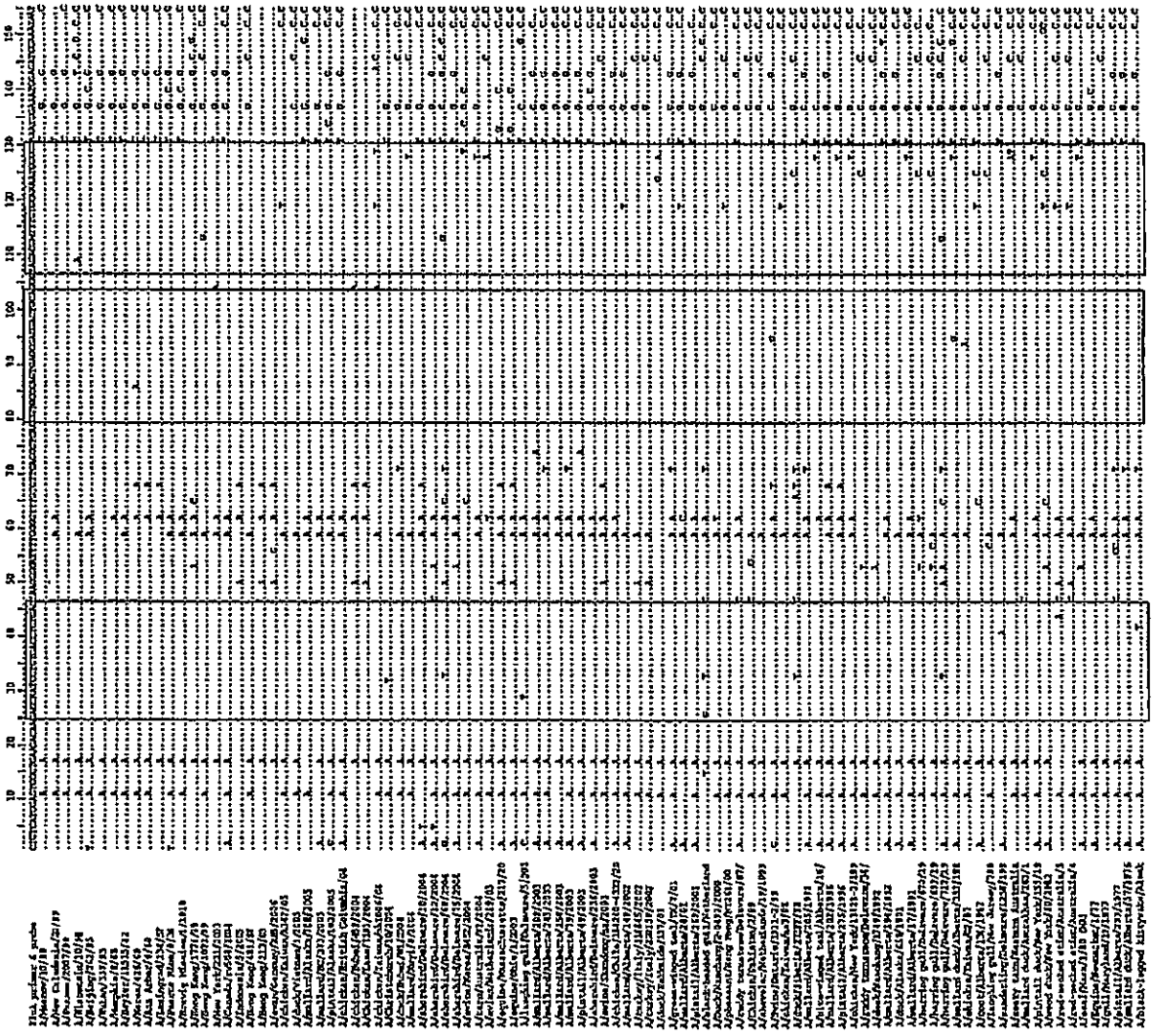


FIG. 9

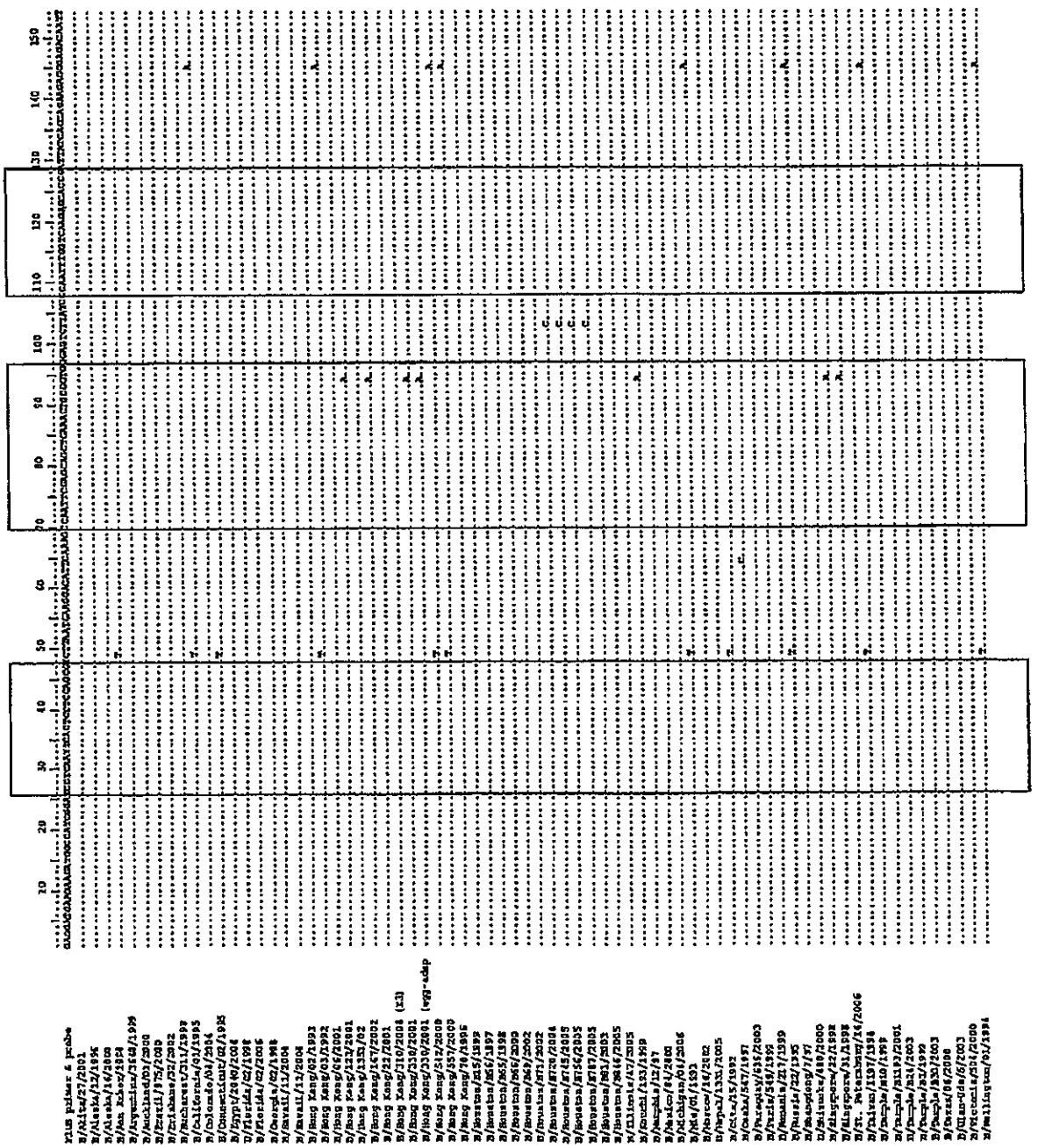
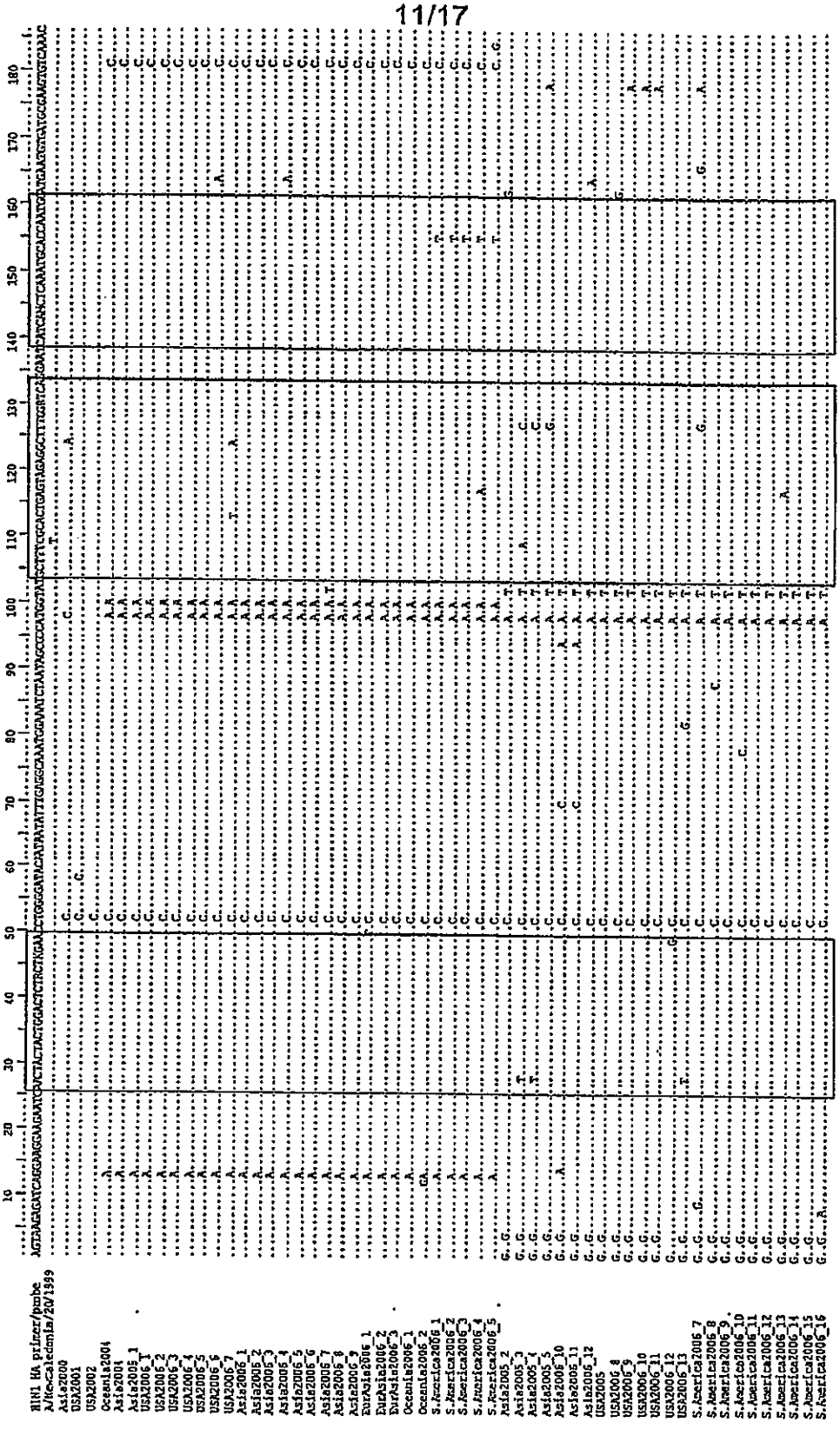


FIG. 10

FIG. 11


H1N1 HA primer/probe
A/New-Caledonia/20/1999
Asia2000
USA2001
USA2002
Oceania2004
Asia2001
Asia2005_1
USA2006_1
USA2006_2
USA2006_3
USA2006_4
USA2006_5
USA2006_6
USA2006_7
Asia2006_1
Asia2005_2
Asia2005_3
Asia2005_4
Asia2006_5
Asia2006_6
Asia2006_7
Asia2006_8
Asia2006_9
EurAsia2006_1
EurAsia2006_2
EurAsia2006_3
Oceania2006_1
Oceania2006_2
S.America2006_1
S.America2006_2
S.America2006_3
S.America2006_4
S.America2006_5
Asia2005_2
Asia2005_3
Asia2005_4
Asia2005_5
Asia2006_10
Asia2006_11
Asia2006_12
USA2005
USA2006_8
USA2006_9
USA2006_10
USA2006_11
USA2006_12
USA2006_13
S.America2006_7
S.America2006_8
S.America2006_9
S.America2006_10
S.America2006_11
S.America2006_12
S.America2006_13
S.America2006_14
S.America2006_15
S.America2006_16

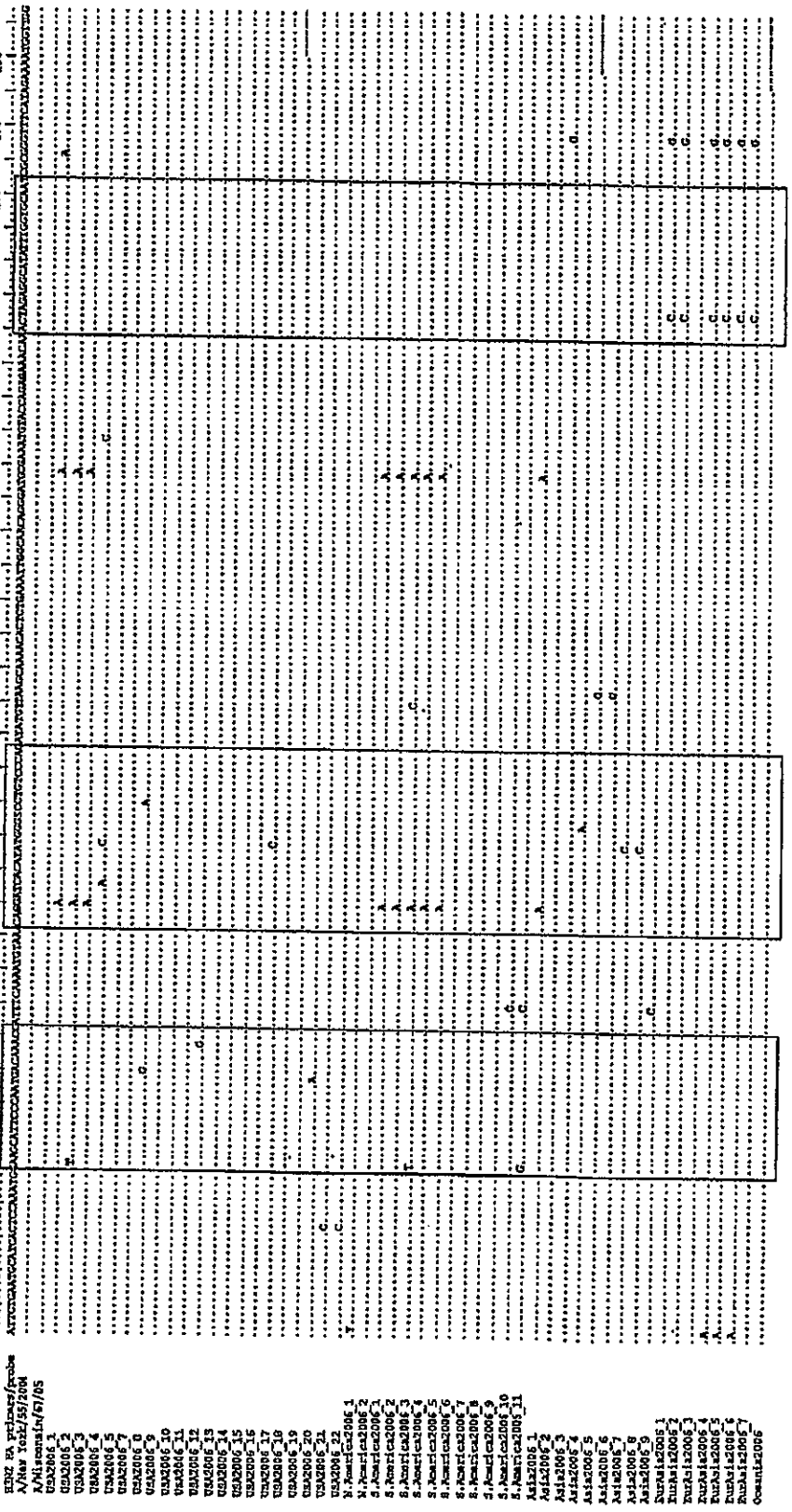
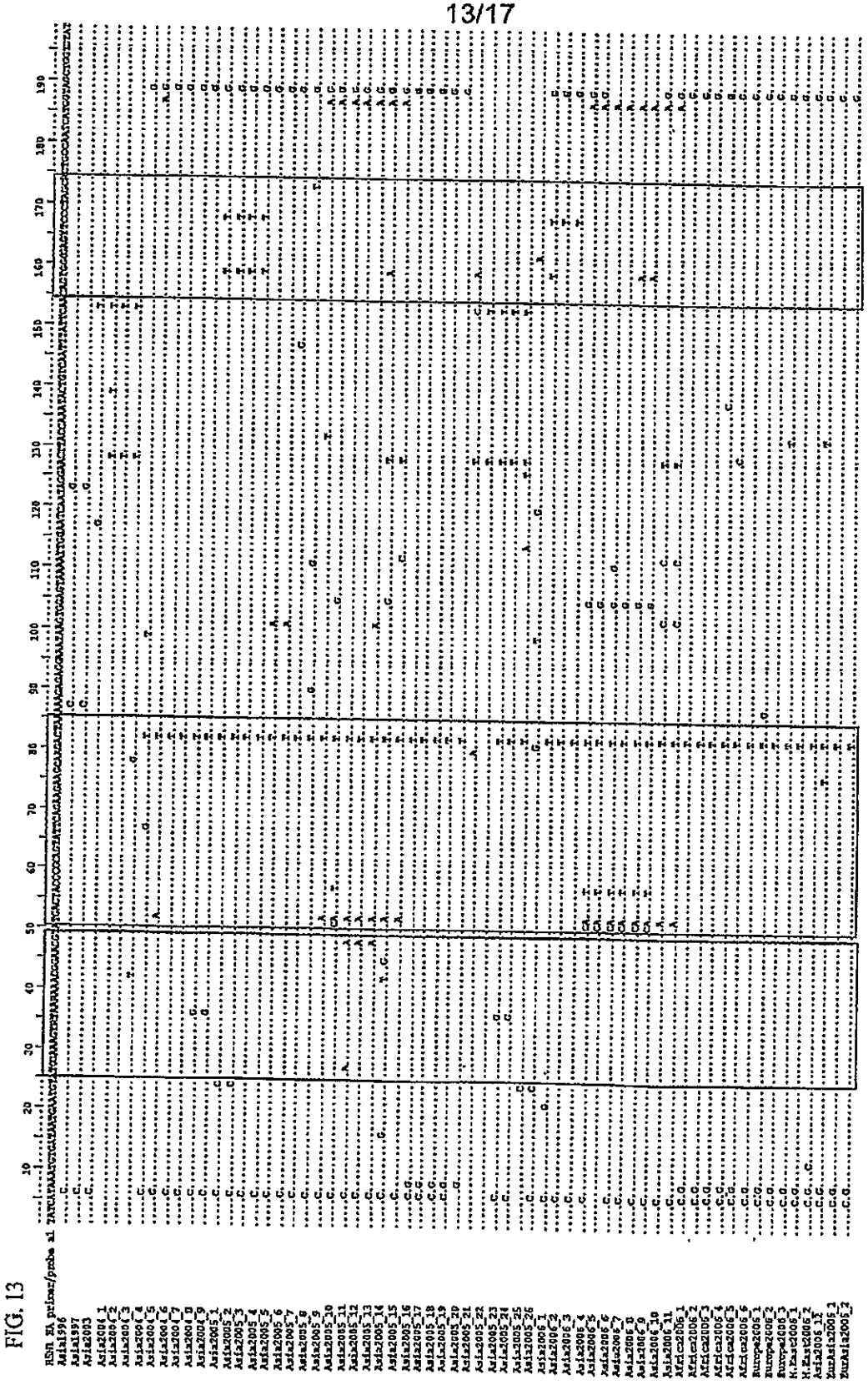


FIG. 12

FIG. 13



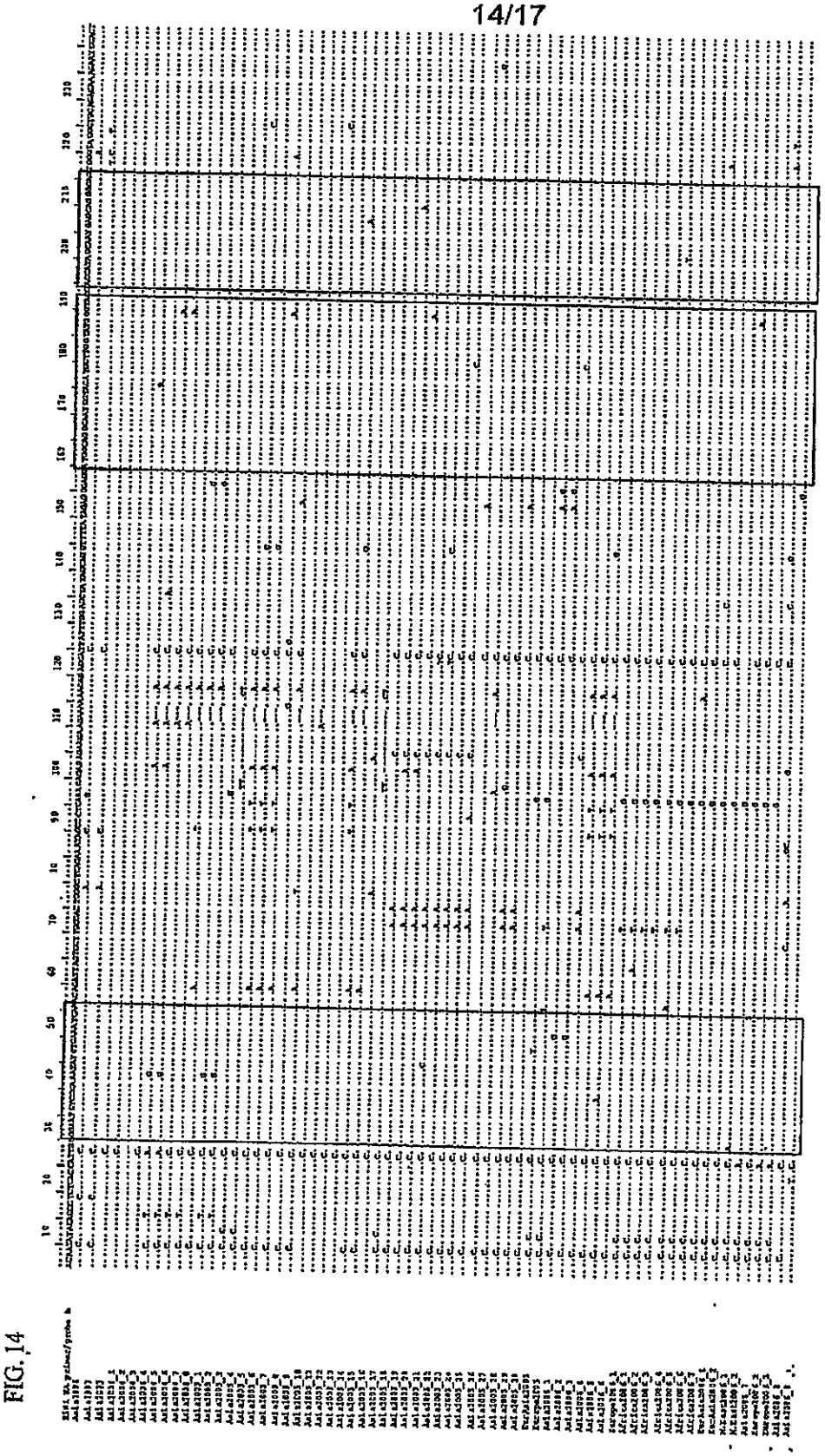


FIG. 14

FIG. 15

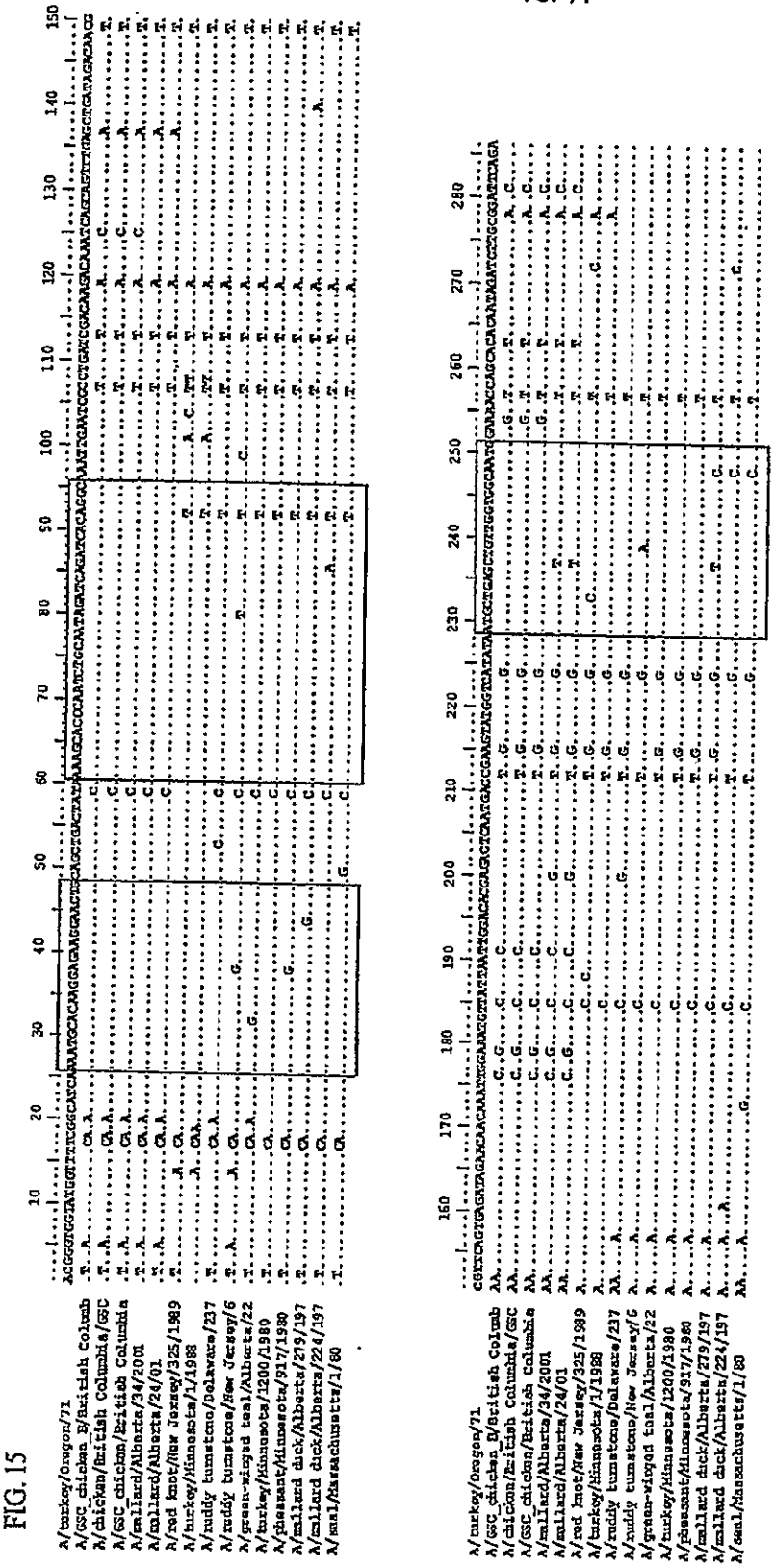
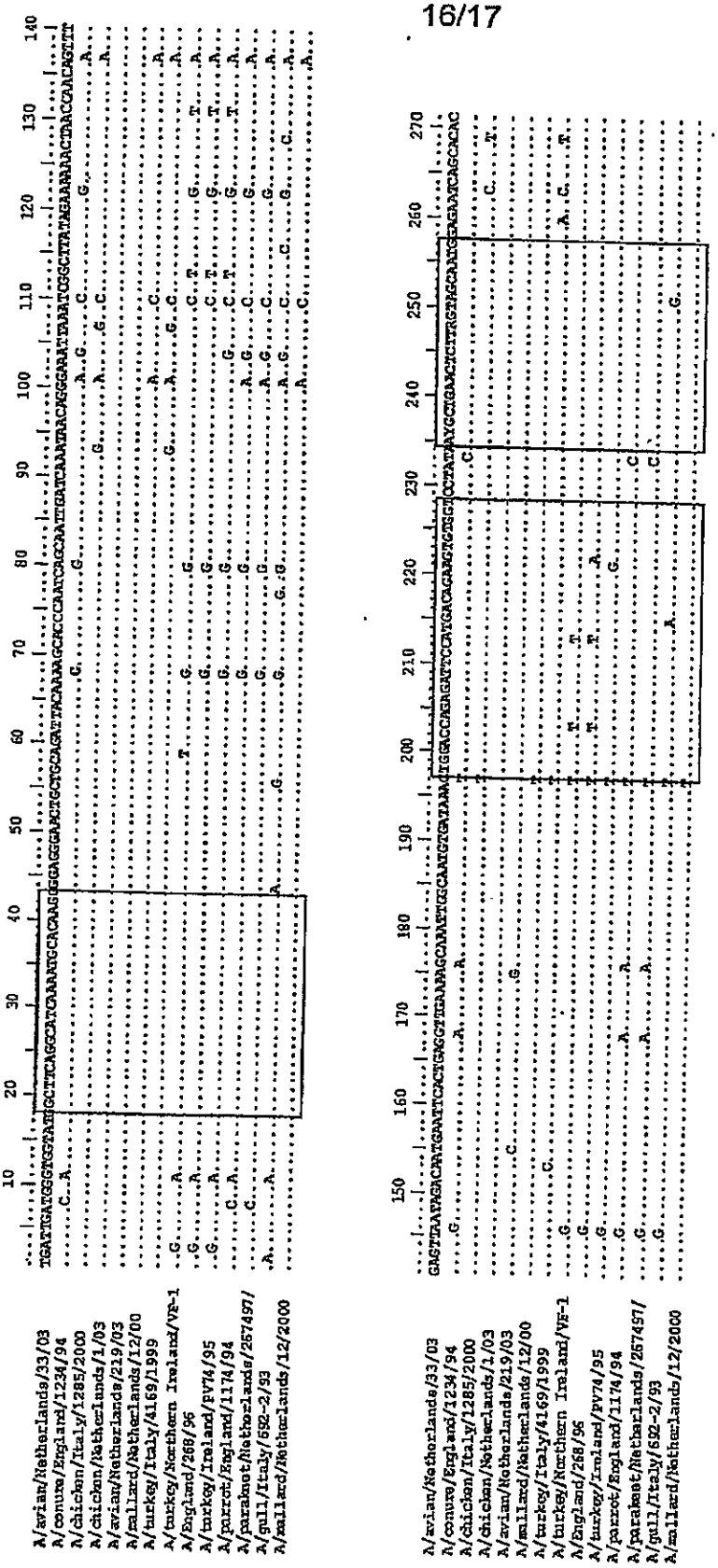

A/turkey/Oregon/71
A/GSC_chicken_B/British Columb
A/chicken/British Columbia/GSC
A/GSC chicken/British Columbia
A/mallard/Alberta/24/01
A/mallard/Alberta/24/01
A/red knot/New Jersey/325/1989
A/turkey/Minnesota/1/1988
A/ruddy turnstone/Delaware/237
A/ruddy turnstone/New Jersey/6
A/green-winged teal/Alberta/22
A/turkey/Minnesota/1200/1980
A/pheasant/Minnesota/917/1980
A/mallard duck/Alberta/279/197
A/mallard duck/Alberta/224/197
A/seal/Massachusetts/1/80

FIG. 16


A/avian/Netherlands/33/03
A/conure/England/1234/94
A/chicken/Italy/1285/2000
A/chicken/Netherlands/1/03
A/avian/Netherlands/219/03
A/mallard/Netherlands/12/00
A/turkey/Italy/4169/1999
A/turkey/Northern Ireland/VF-1
A/England/268/96
A/turkey/Ireland/PV74/95
A/parrot/England/1174/94
A/parakeet/Netherlands/267497/
A/gull/Italy/692-2/93
A/mallard/Netherlands/12/2000

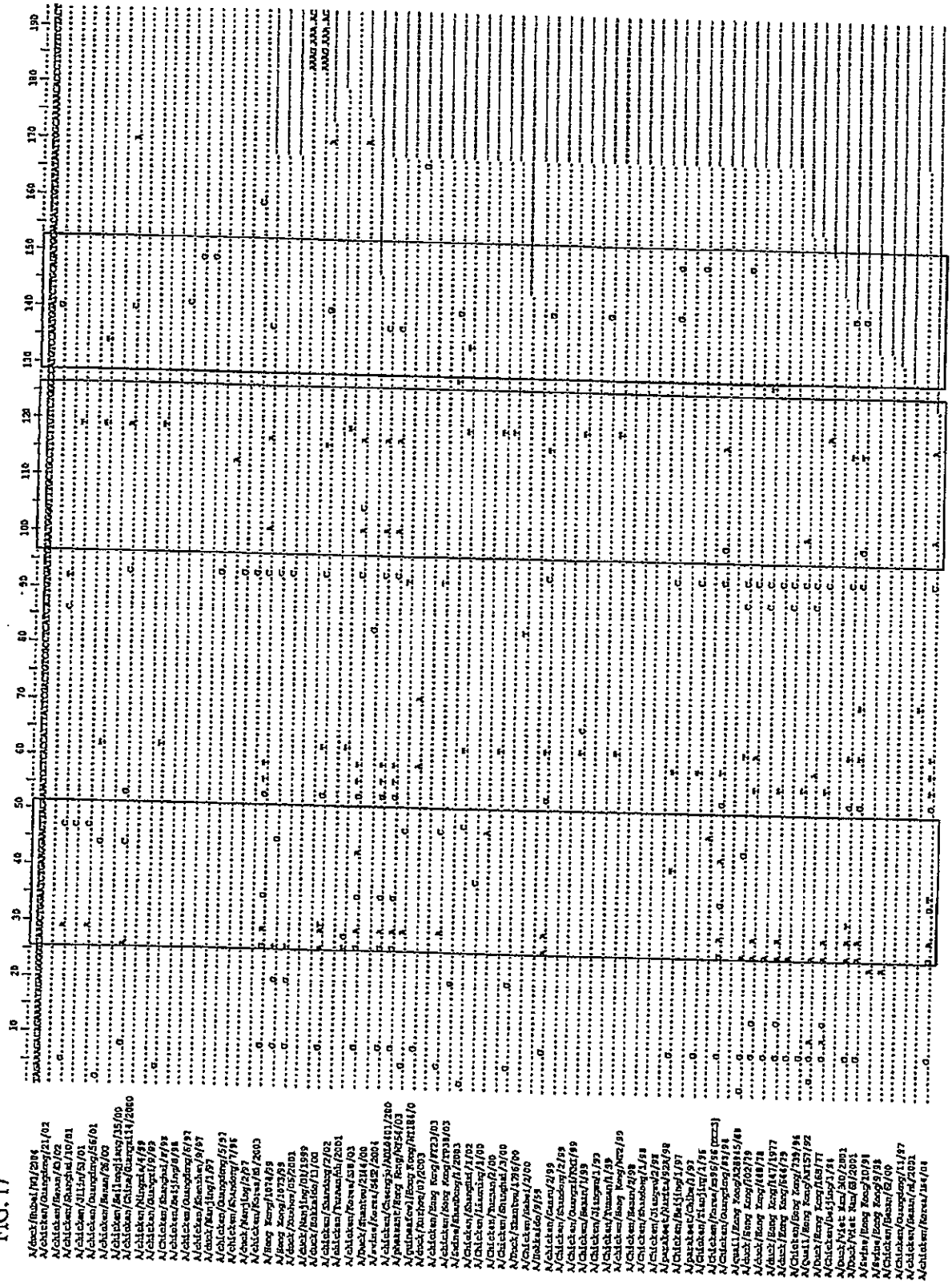



FIG. 17