

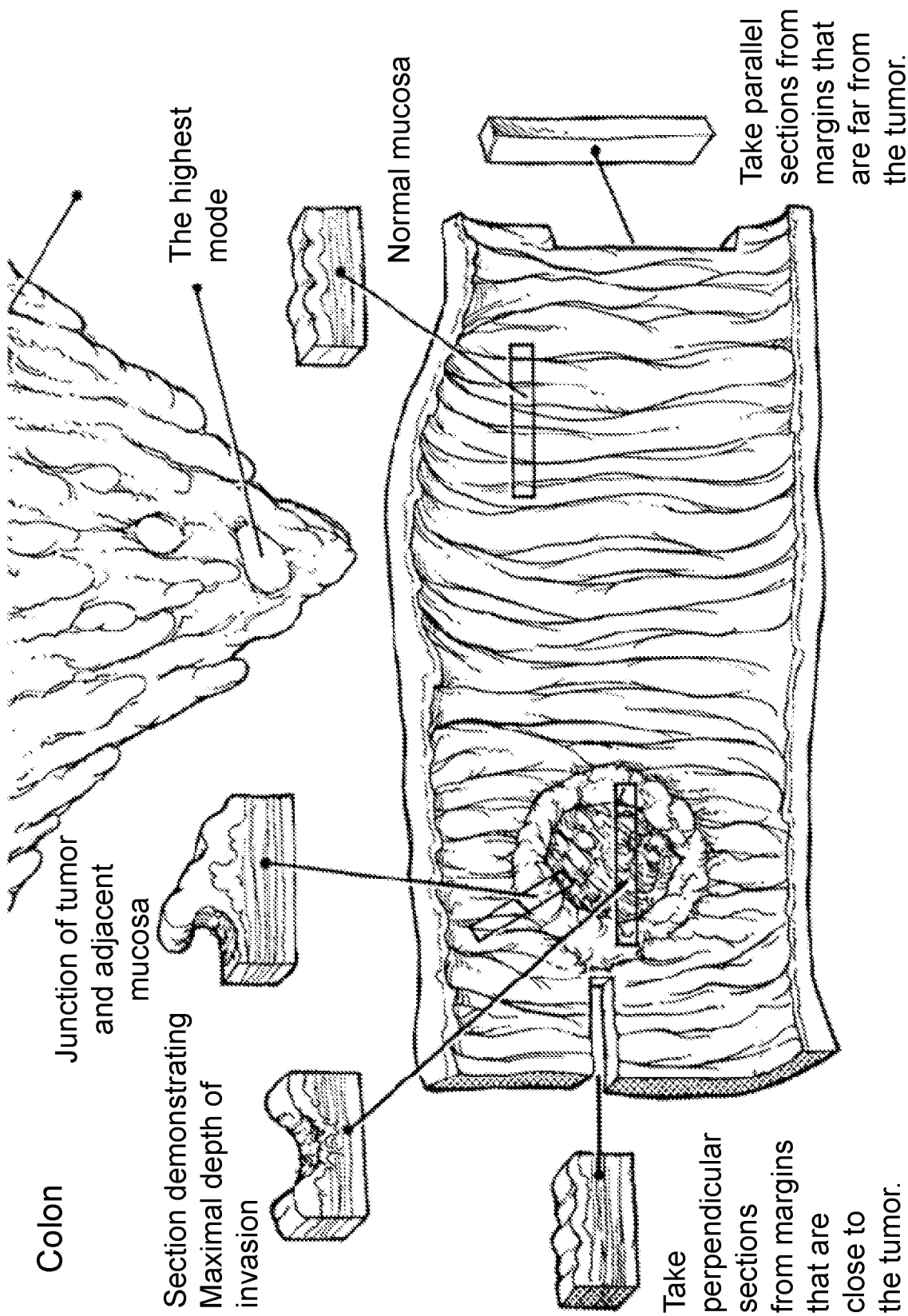
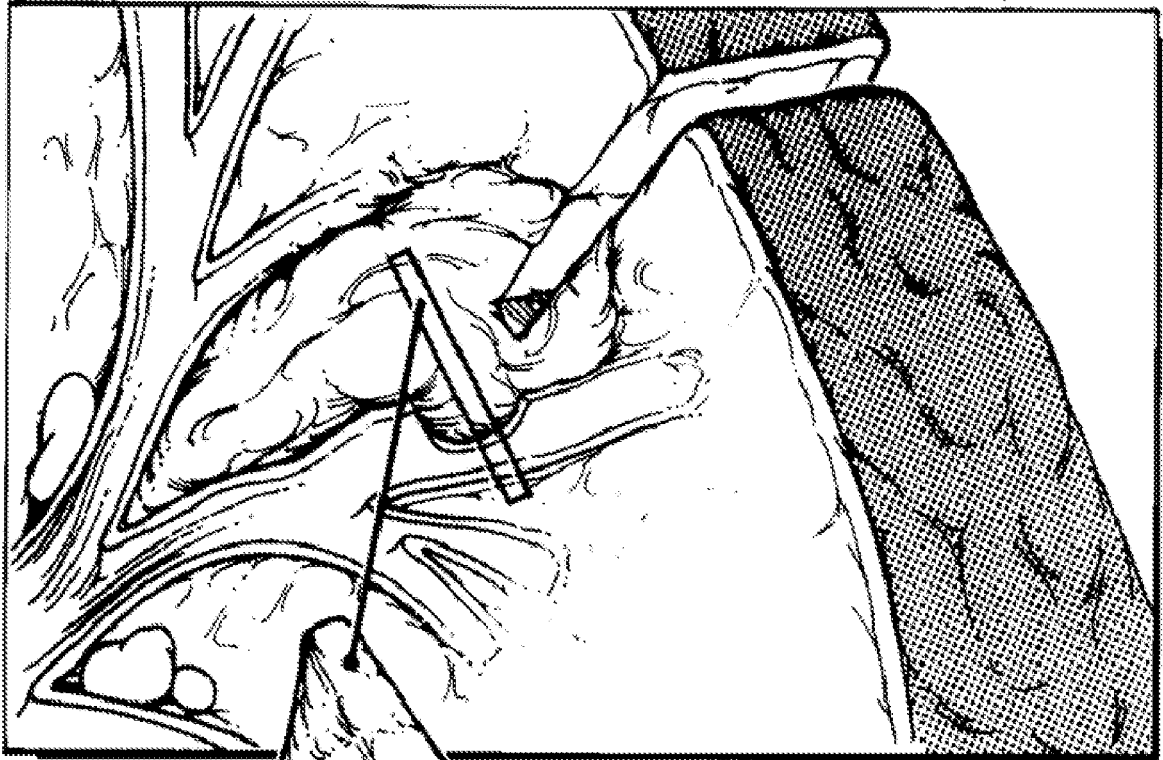


FIG.1A

2/78

Lung



Section showing the
relationship of the
tumor to the airway

FIG. 1B

3/78

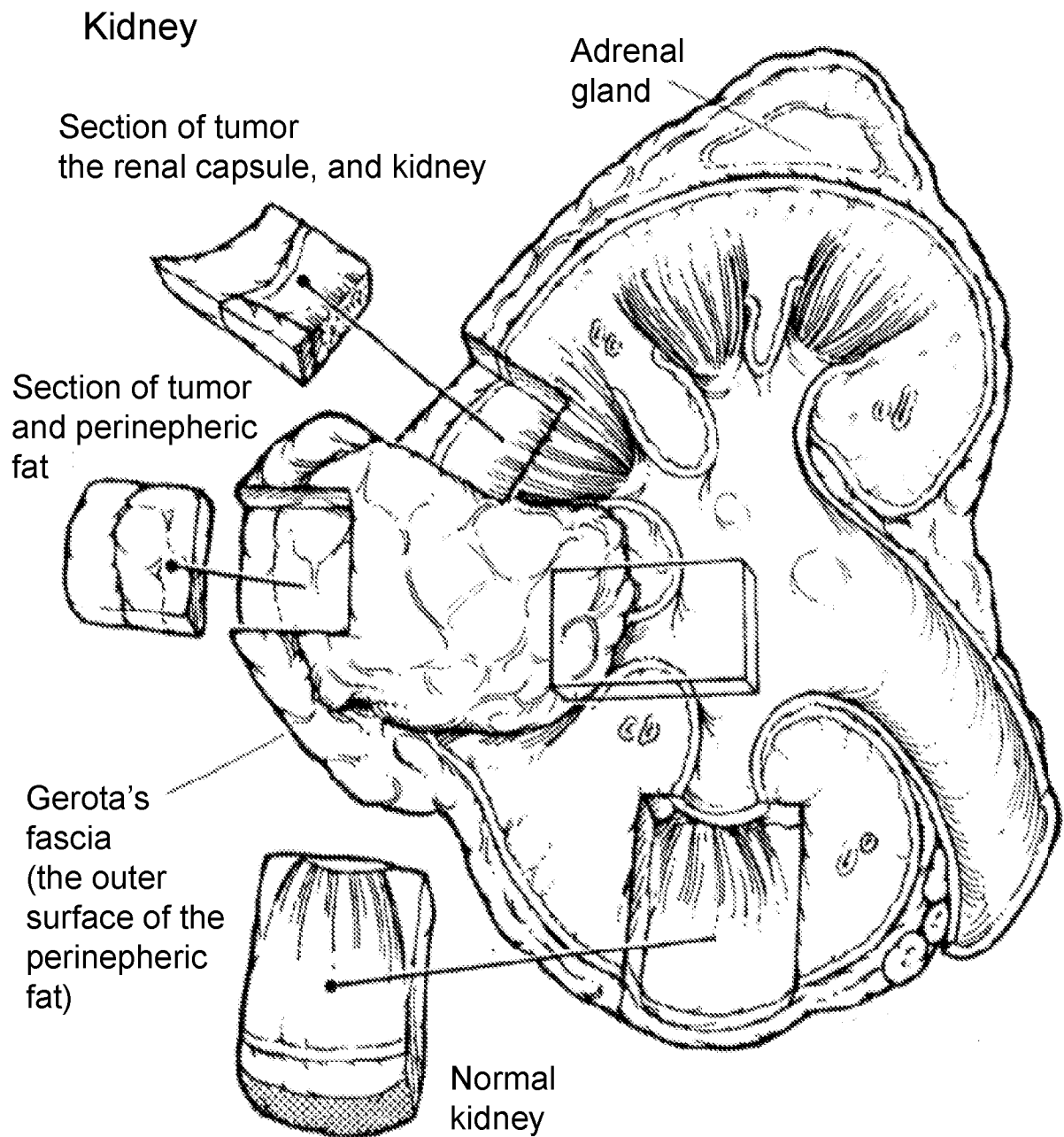


FIG. 1C

4/78

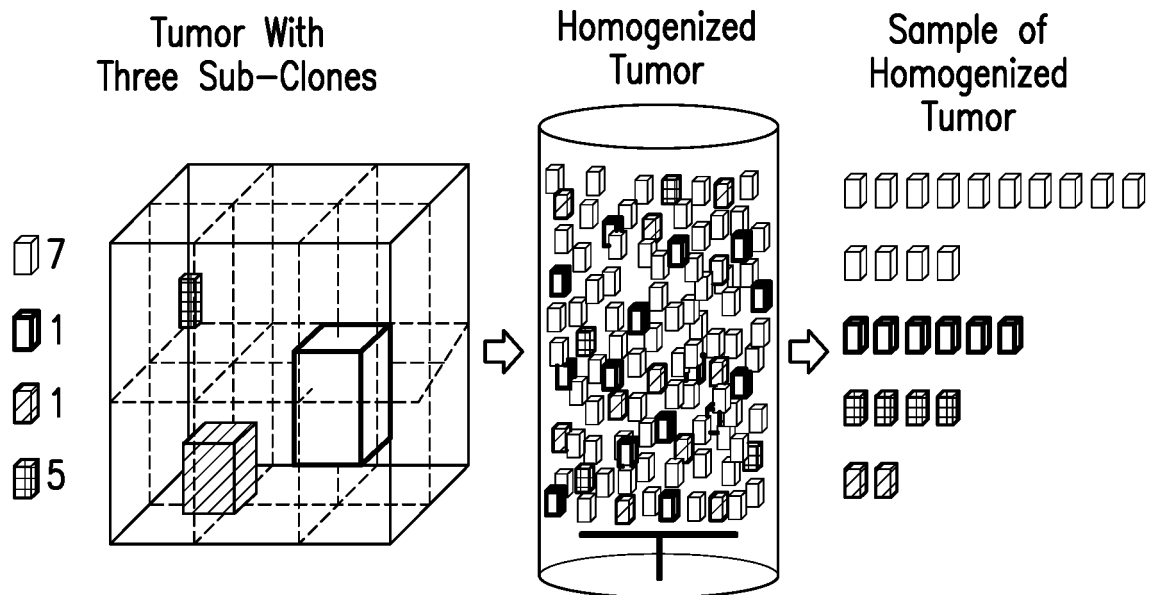


FIG.2A

Sample Size Required For 99.999% Probability
Of Detecting 5 Cells From Sub-Clone

Sample Size (# of cells)	Sub-Clone Prevalence
198	0.1%
2,057	0.01%
20,640	0.001%

FIG.2B

5/78

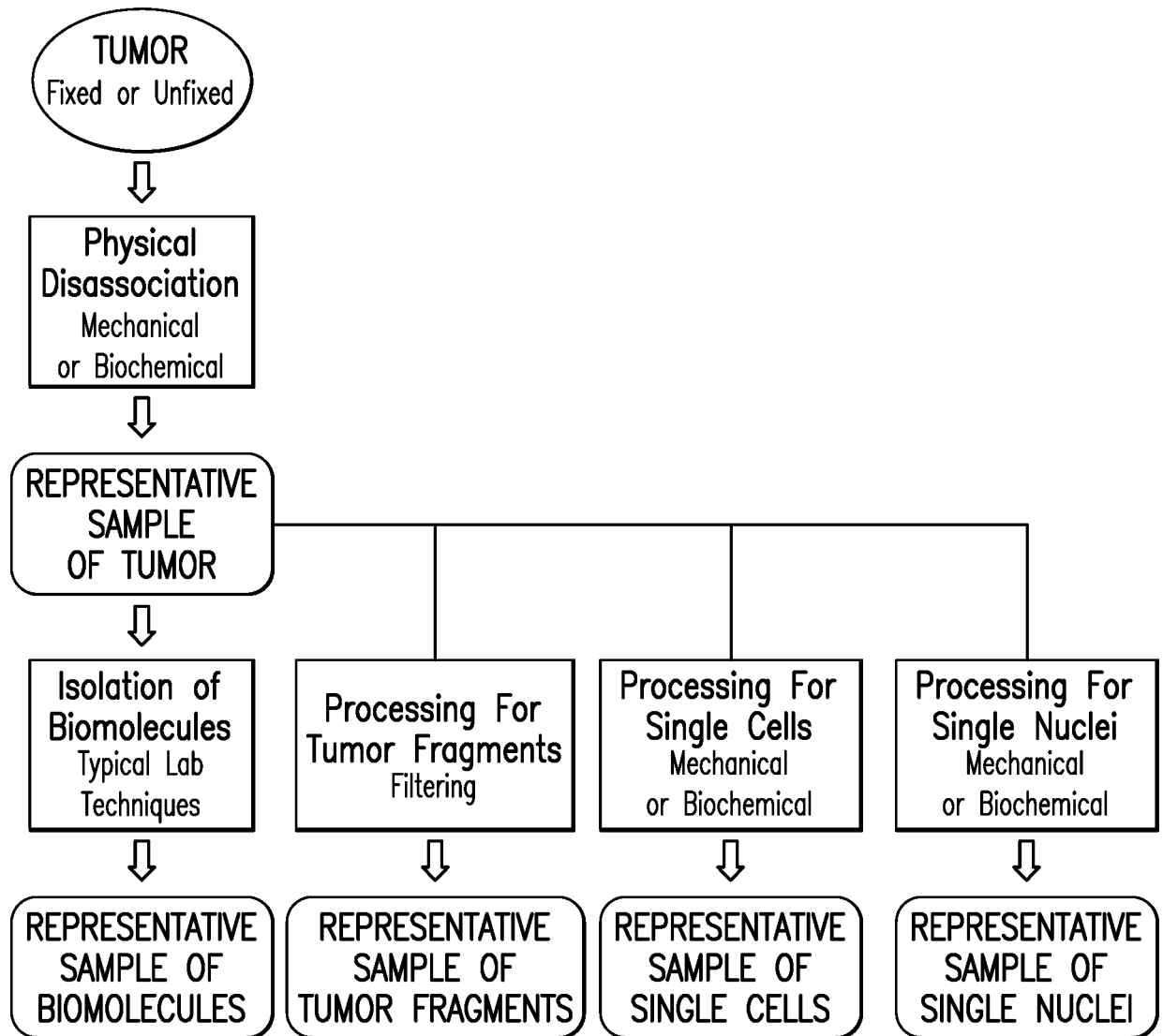


FIG.3

6/78

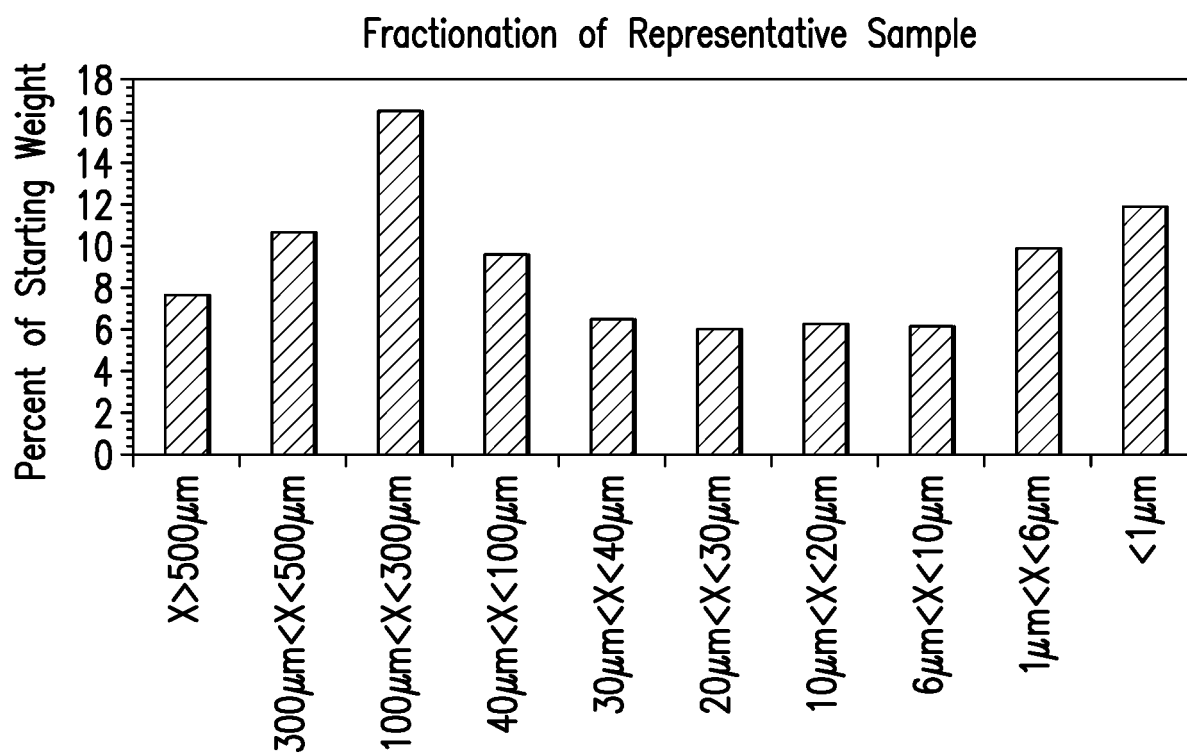


FIG.4

7/78

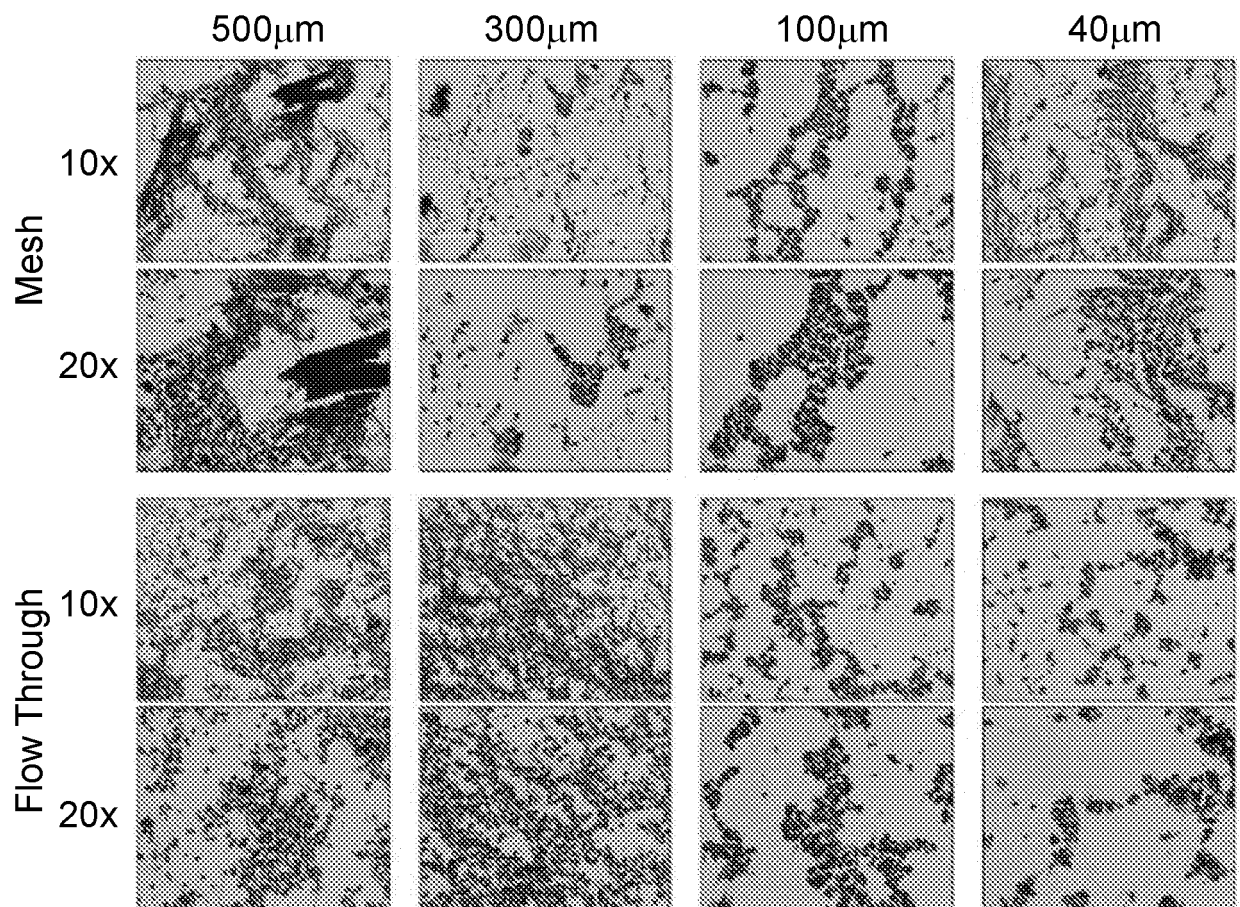


FIG.5A

8/78

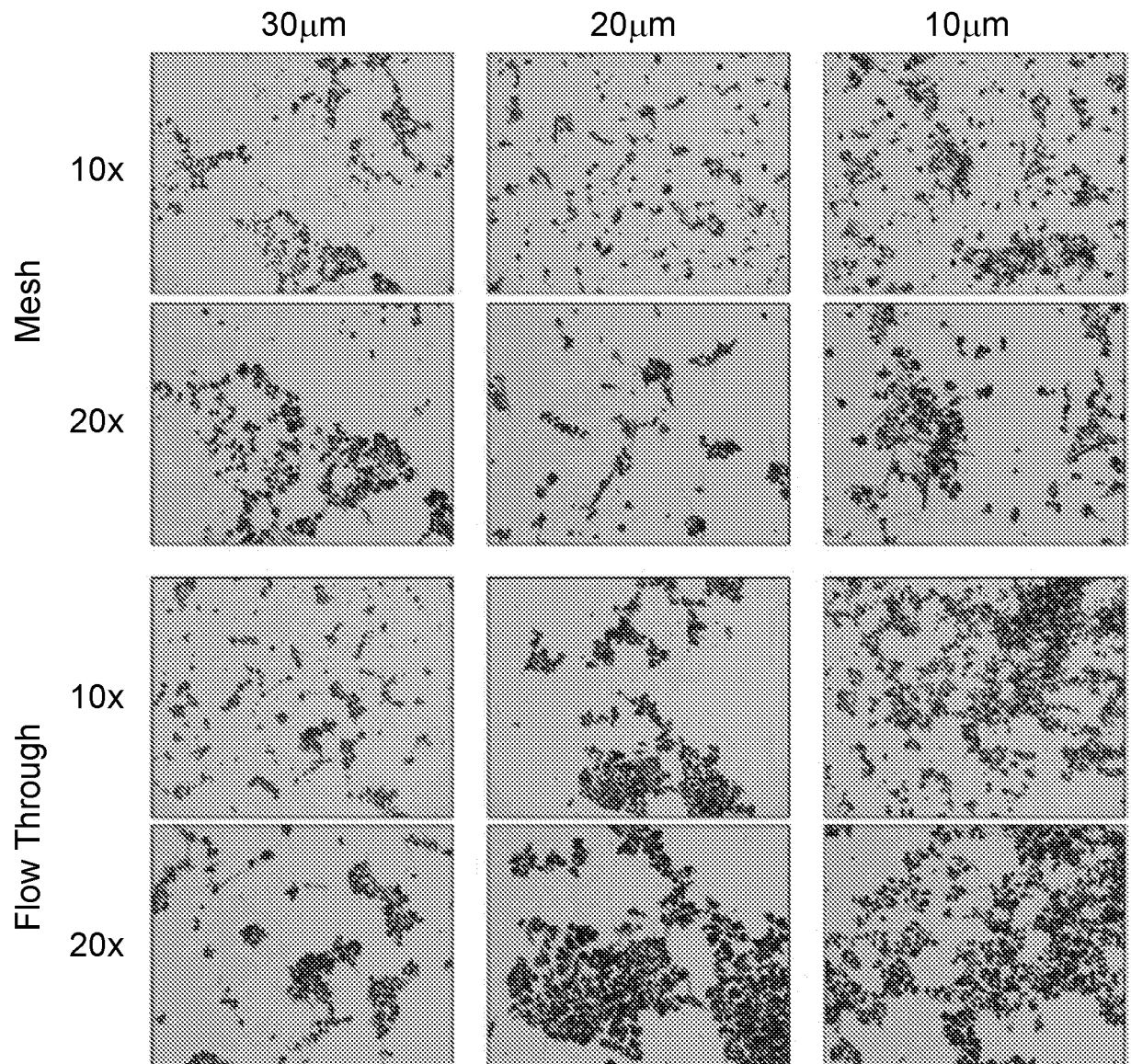


FIG.5B

9/78

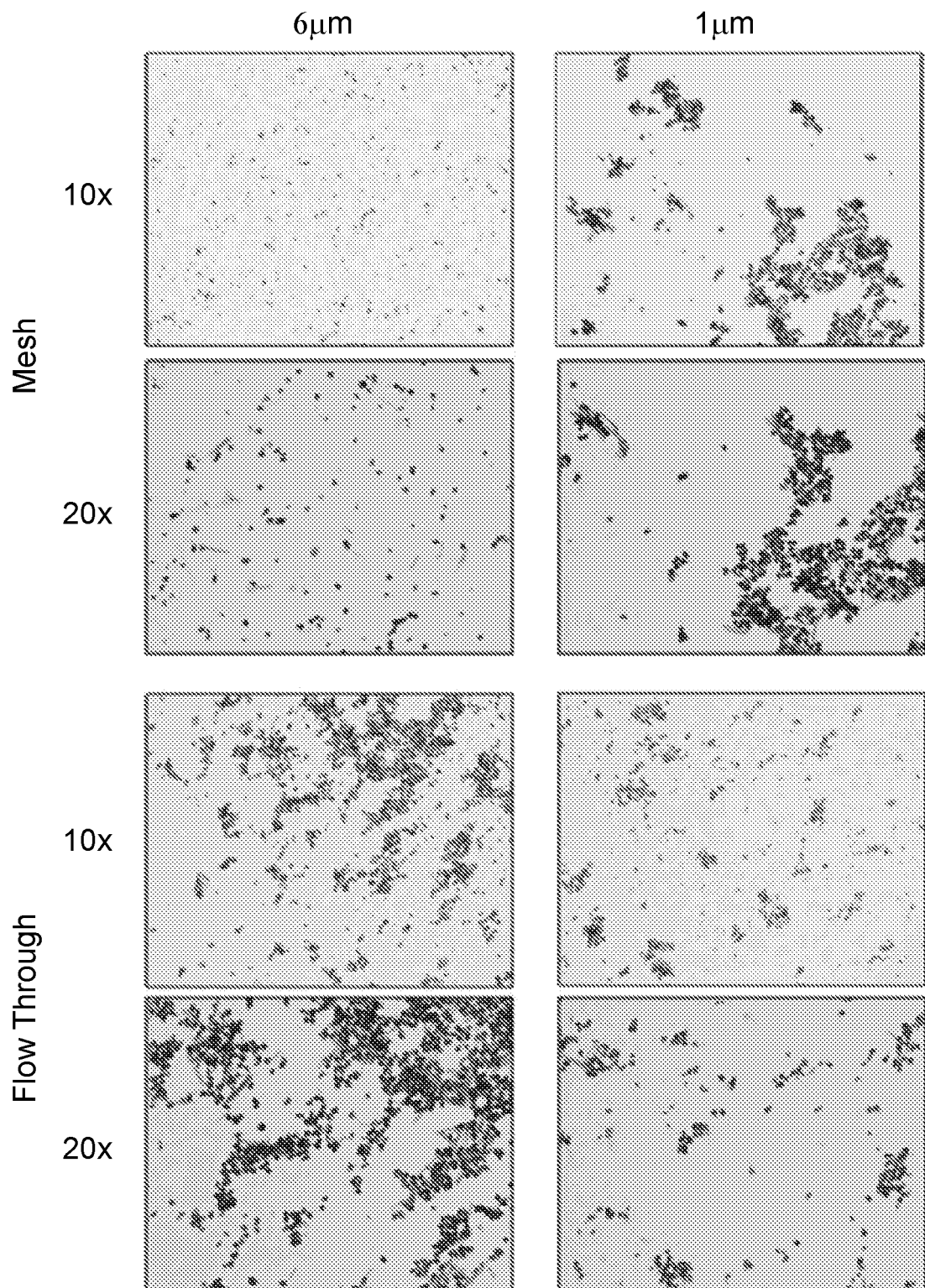


FIG.5C

10/78

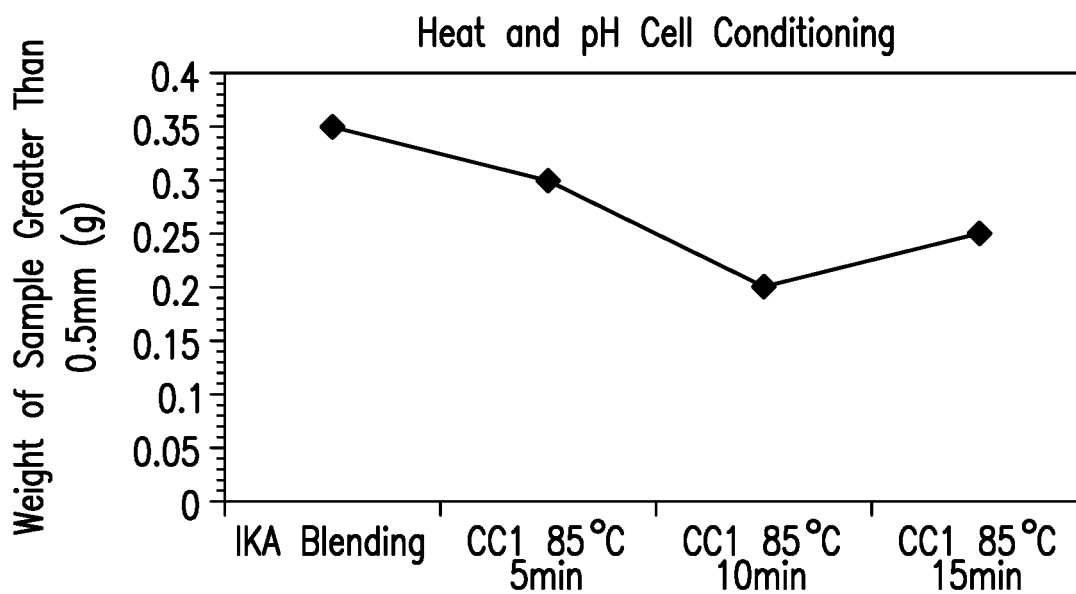


FIG.6A

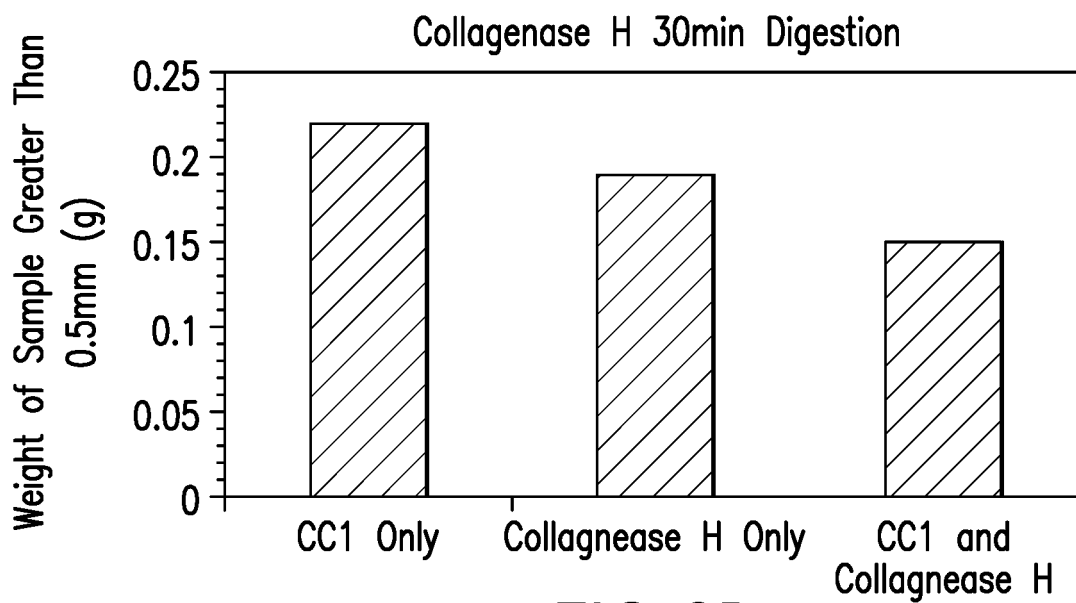


FIG.6B

11/78

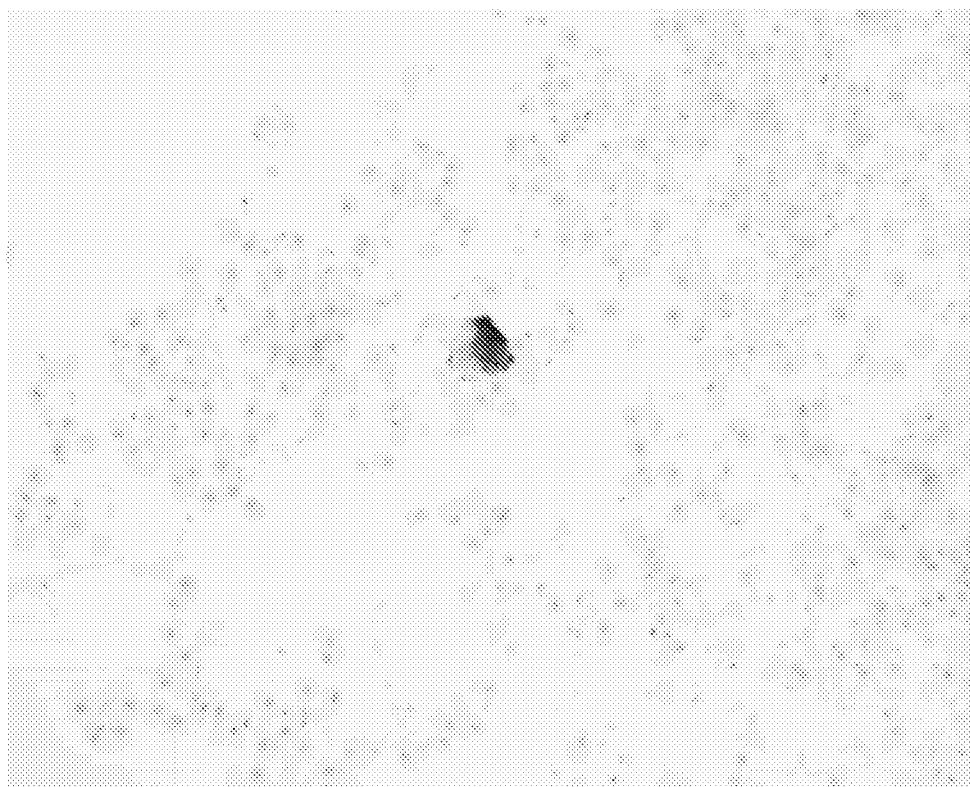


FIG.6C

12/78



Chicken Breast
Fish Filet Blending
 ↑
 & French Pressing

Her2+ Tumor

Chicken Liver

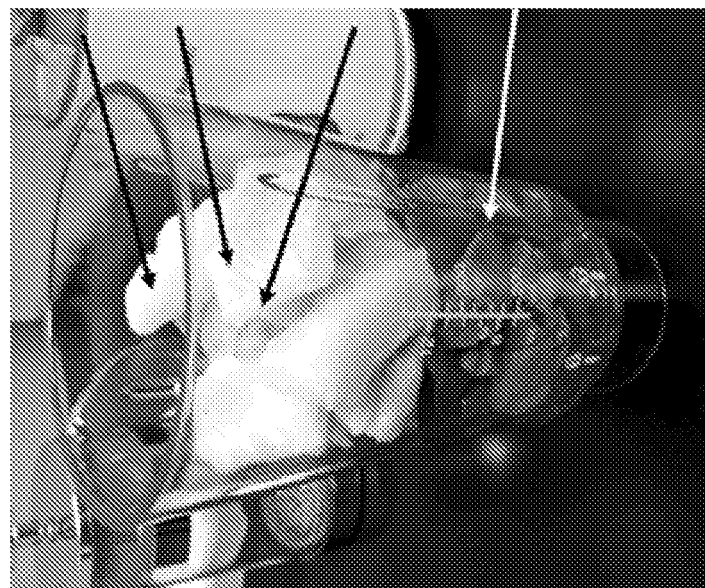


FIG.6D

13/78

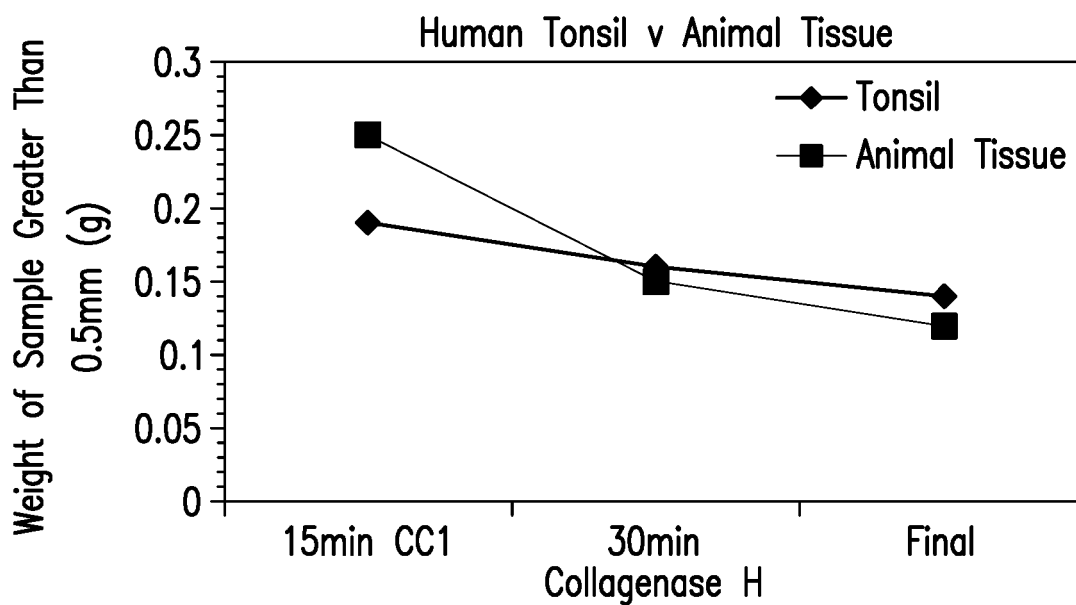


FIG.7A

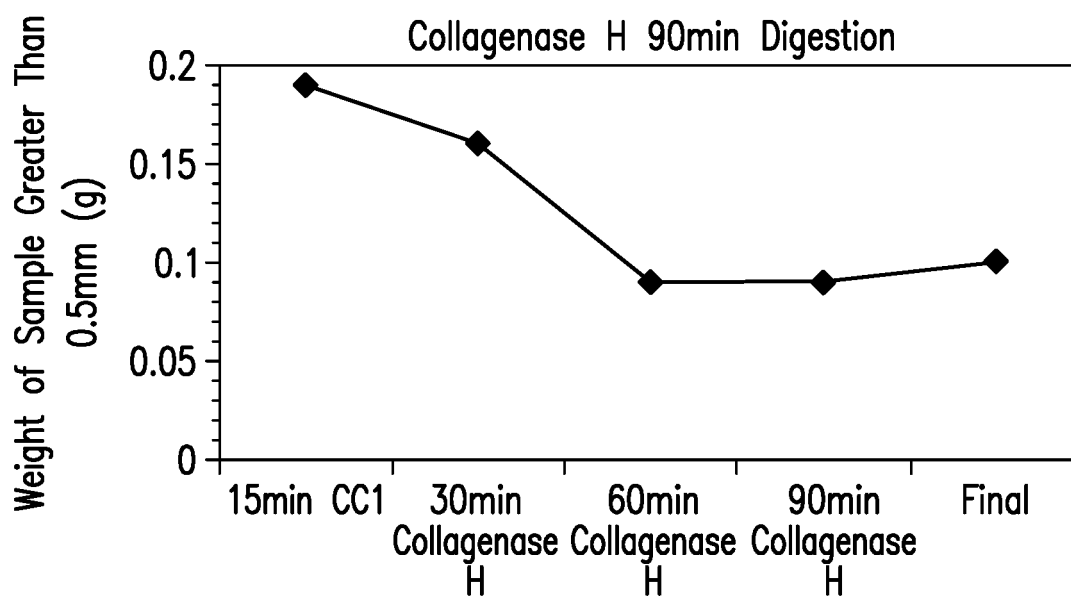


FIG.7B

14/78

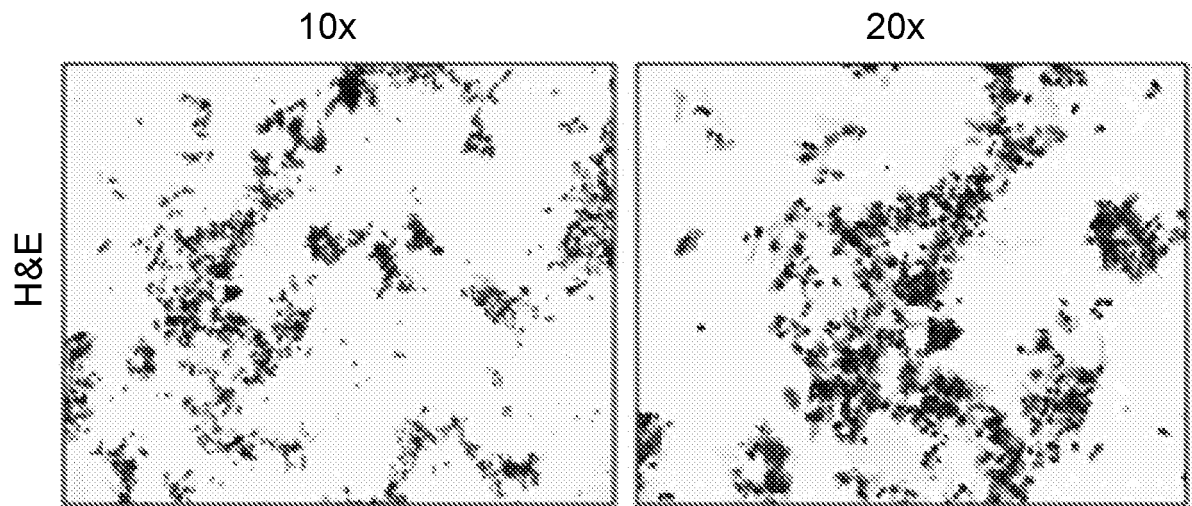


FIG.8A

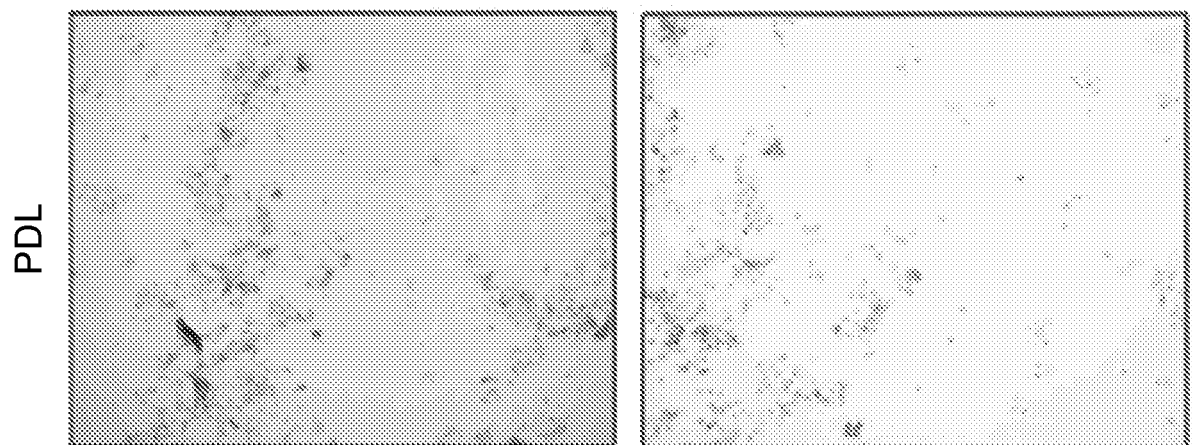


FIG.8B

15/78

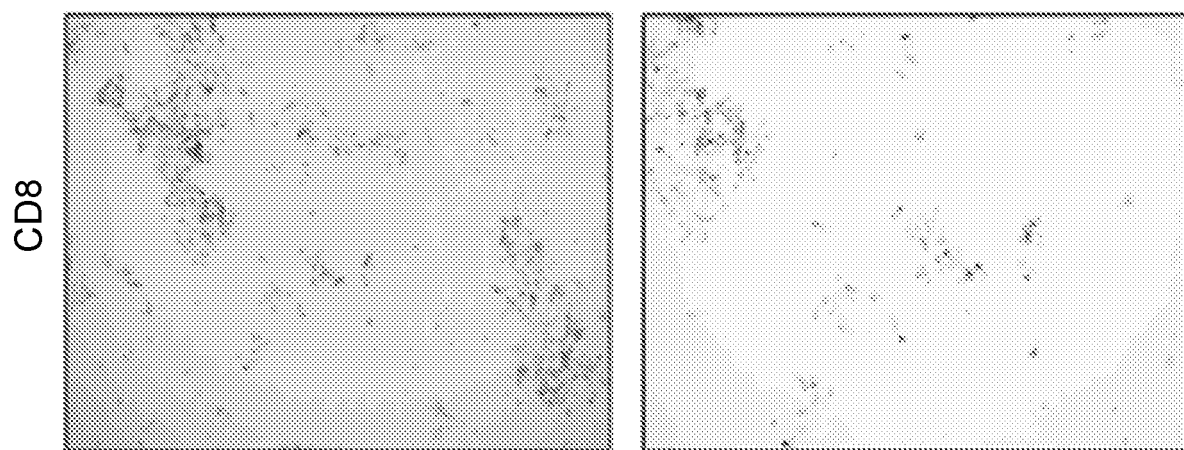


FIG.8C

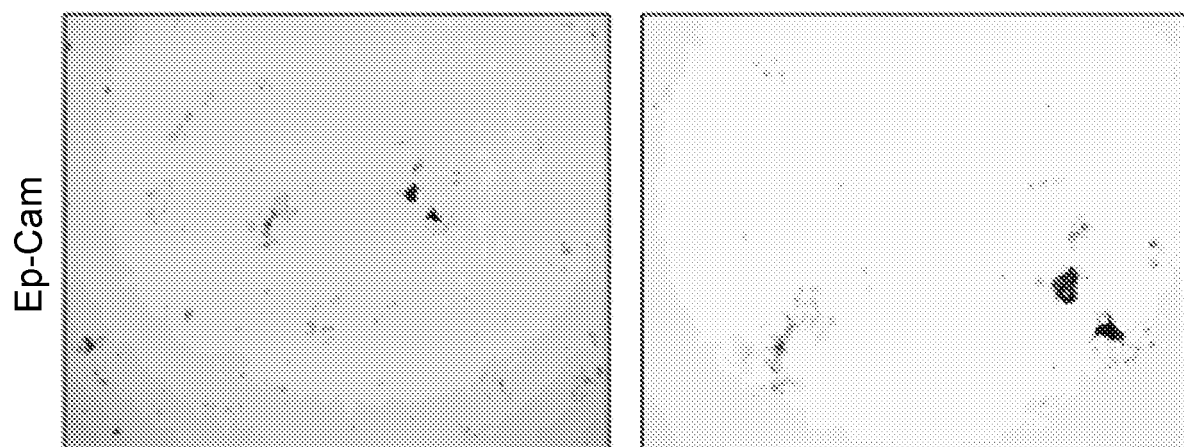


FIG.8D

16/78

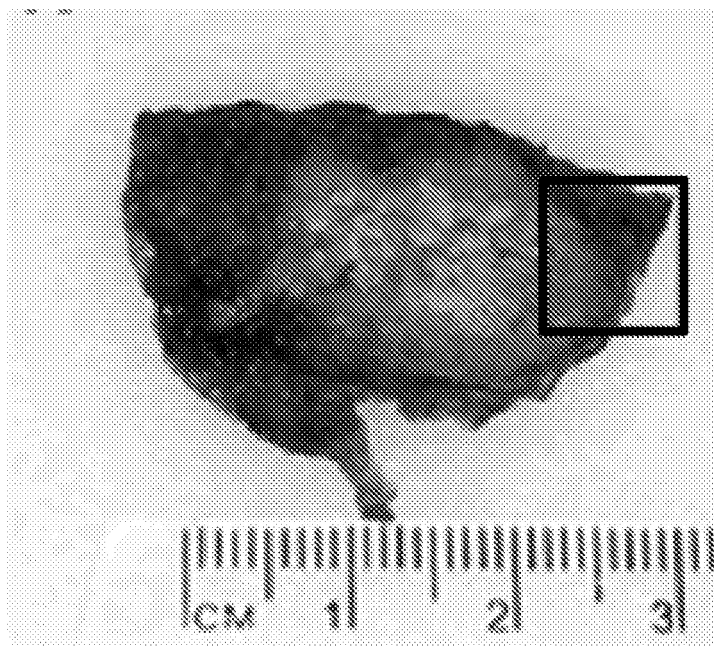


FIG. 9A

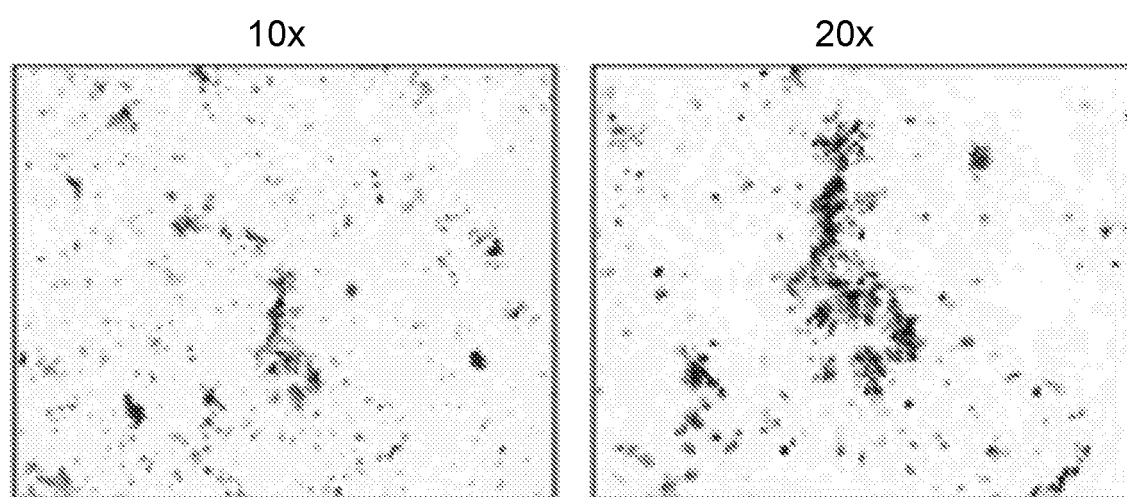


FIG. 9B

17/78

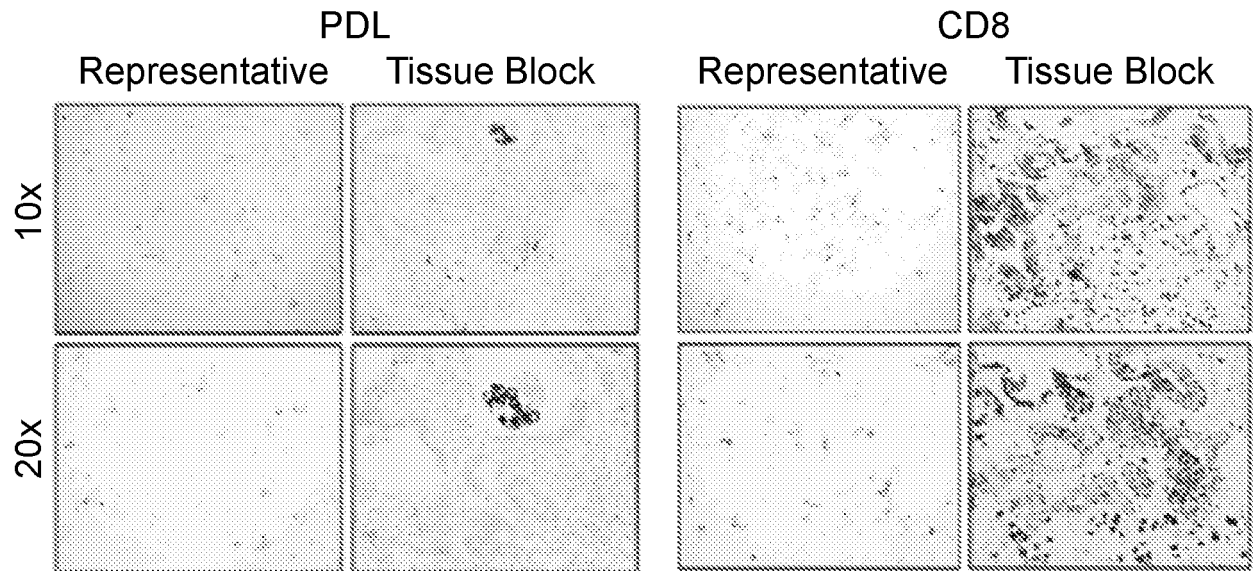


FIG.9C

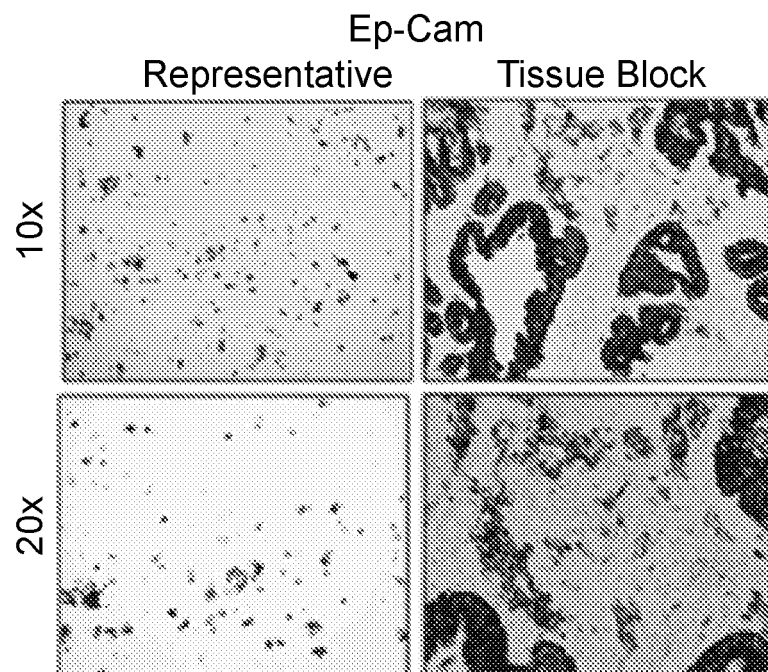


FIG.9D

18/78

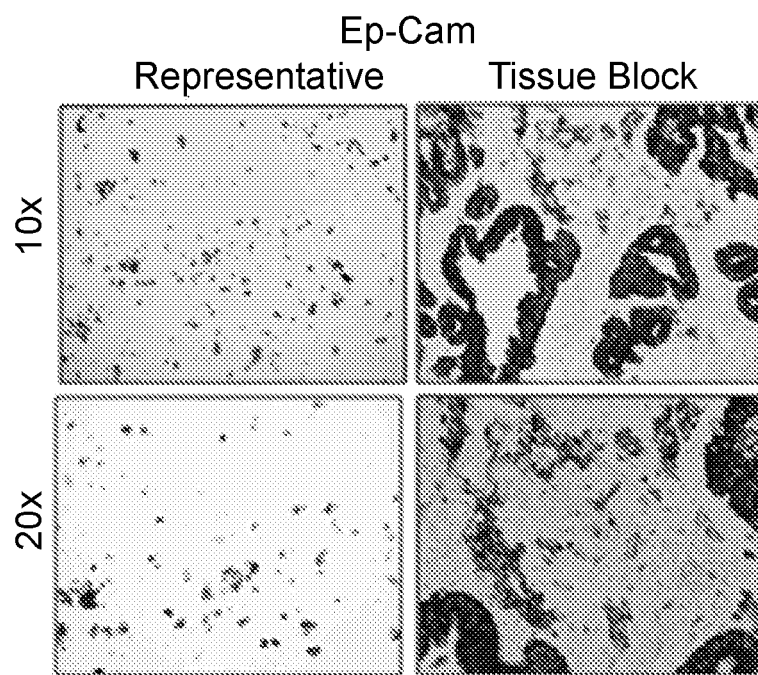


FIG.9E

Protocol # 145 : Rep Dia-DAB-Her2 (11/18/2015)

19/78

Procedure: Rep Dia BXT v1-DAB

BenchMark XT IHC/ISH Staining Module

Step No	Procedure Step
1	***** Select EZ Prep *****
2	***** Start Timed Steps *****
3	***** Mixers On *****
4	Rinse Slide With Reaction Buffer
5	Adjust Slide Volume With Reaction Buffer
6	Apply Long Cell Conditioner #1
7	Apply CC Coverslip Long
8	Warmup Slide to 90 DegC, and Incubate for 4 Minutes
9	Apply Cell Conditioner #1
10	Incubate for [4 Minutes] {Cell Conditioner #1}
11	Disable Slide Heater
12	Incubate for [4 Minutes] {Cell Conditioner #1}
13	Apply 300µl of Reaction Buffer
14	Apply Coverslip
15	Warmup Slide to 37 Deg C
16	***** Procedure Synchronization *****
17	***** Select SSC Wash *****
18	Warmup Slide to 37 Deg C
19	Rinse Slide With Reaction Buffer
20	Adjust Slide Volume With Reaction Buffer
21	Apply One Drop of Ov PEROX IHBTR, Apply Coverslip, and Incubate for 4 Minutes
22	Rinse Slide With Reaction Buffer
23	Adjust Slide Volume With Reaction Buffer
24	Apply Coverslip
25	[If not selected, temperature will default to 37°C.]
26	Warmup Slide to 37 Deg C, and Incubate for 4 Minutes
27	Rinse Slide With Reaction Buffer
28	Adjust Slide Volume With Reaction Buffer
29	Apply Coverslip, One Drop of [ANTIBODY 6] (Antibody), and Incubate for [0 Hr 4 Min]
30	[Titration will only happen if selected]
31	Warmup Slide to 37 Deg C
32	Rinse Slide With Reaction Buffer
33	Apply 460µl + VA Reaction Buffer
34	Apply Coverslip
35	Rinse Slide With Reaction Buffer
36	Apply 460µl + VA Reaction Buffer
37	Apply Coverslip
38	Rinse Slide With Reaction Buffer
39	[If not selected, HQ Universal Linker will dispense and incubate 8 min in normal slide volume.]
40	Adjust Slide Volume With Reaction Buffer
41	Apply Coverslip, One Drop of OV HQ UNIV LINKR, and Incubate for 8 Minutes
42	Rinse Slide With Reaction Buffer
43	Apply 460µl + VA Reaction Buffer
44	Apply Coverslip
45	Rinse Slide With Reaction Buffer

* one drop is one reagent dispense

FIG.10A

Protocol # 145 : Rep Dia-DAB-Her2 (11/18/2015)
 Procedure: Rep Dia BXT v1-DAB
 BenchMark XT IHC/ISH Staining Module

20/78

Step No	Procedure Step
46	Apply 460 μ l + VA Reaction Buffer
47	Apply Coverslip
48	Rinse Slide With Reaction Buffer
49	[If not selected, HRP Multimer will dispense and incubate 8 min in normal slide volume.]
50	Adjust Slide Volume With Reaction Buffer
51	Apply Coverslip, One Drop of OV HRP MULTIMER, and incubate 8 Minutes
52	Rinse Slide With Reaction Buffer
53	Apply 900 μ l of Reaction Buffer
54	Apply Coverslip
55	[OptiView Amplifier and OptiView Amplification H2O2 Incubation time
56	Rinse Slide With Reaction Buffer
57	Adjust Slide Volume With Reaction Buffer
58	Apply One Drop of OV AMP H2O2 and One Drop of OV AMPLIFIER, Apply Coverslip, Incubate for [4 Minutes]
59	Rinse Slide With Reaction Buffer
60	Apply 900 μ l of Reaction Buffer
61	Apply Coverslip
62	[OptiView Amplification Multimer Incubation time]
63	Rinse Slide With Reaction Buffer
64	Adjust Slide Volume With Reaction Buffer
65	Apply One Drop of OV AMP MULTIMER, Apply Coverslip, and Incubate for [4 Minutes]
66	Rinse Slide With Reaction Buffer
67	Apply 900 μ l of Reaction Buffer
68	Apply Coverslip
69	Rinse Slide With Reaction Buffer
70	Apply 460 μ l + VA Reaction Buffer
71	Apply Coverslip
72	Rinse Slide With Reaction Buffer
73	Apply 460 μ l + VA Reaction Buffer
74	Apply Coverslip
75	Rinse Slide With Reaction Buffer
76	Adjust Slide Volume With Reaction Buffer
77	Apply One Drop of OV H2O2 and One Drop of OV DAB, Apply Coverslip, Incubate for 8 Minutes
78	Rinse Slide With Reaction Buffer
79	Adjust Slide Volume With Reaction Buffer
80	Apply One Drop of OV COPPER, Apply Coverslip, and Incubate for 4 Minutes
81	Rinse Slide With Reaction Buffer
82	Adjust Slide Volume With Reaction Buffer
83	Apply Coverslip
84	Disable Slide Heater
85	***** Select Optional Wash *****
86	***** Select SSC Wash *****
87	Warmup Slide to 37 Deg C
88	Rinse Slide With Reaction Buffer
89	Adjust Slide Volume With Reaction Buffer
90	Apply One Drop of [HEMATOXYLIN II] { Counterstain }, Apply Coverslip, and Incubate for [8 Minutes]
* one drop is one reagent dispense	

FIG.10B

21/78

Protocol # 145 : Rep Dia-DAB-Her2 (11/18/2015)

Procedure: Rep Dia BXT v1-DAB

BenchMark XT IHC/ISH Staining Module

Step No	Procedure Step
91	Rinse Slide With Reaction Buffer
92	Adjust Slide Volume With Reaction Buffer
93	Apply Coverslip
94	Rinse Slide With Reaction Buffer
95	Adjust Slide Volume With Reaction Buffer
96	Apply One Drop of [BLUING REAGENT] {Post Counterstain}, Apply Coverslip, and Incubate for [8 Minutes]
97	Rinse Slide With Reaction Buffer
98	Adjust Slide Volume With Reaction Buffer
99	Apply Coverslip
100	Disable Slide Heater
101	***** Start Timed Steps *****
102	Rinse Slide With Reaction Buffer

* one drop is one reagent dispense

FIG.10C

22/78

Protocol # 150 : Rep Dia Fluorescence—4min/16min (11/18/2015)
 Procedure: Rep Dia BXT v2—Fluorescence
 BenchMark XT IHC/ISH Staining Module

Step No	Procedure Step
1	***** Select EZ Prep *****
2	***** Start Timed Steps *****
3	***** Mixers On *****
4	Rinse Slide With Reaction Buffer
5	Adjust Slide Volume With Reaction Buffer
6	Apply Long Cell Conditioner #1
7	Apply CC Coverslip Long
8	Warmup Slide to 90 Deg C, and Incubate for 4 Minutes
9	Apply Cell Conditioner #1
10	Incubate for [4 Minutes] {Cell Conditioner #1}
11	Disable Slide Heater
12	Incubate for [4 Minutes] {Cell Conditioner #1}
13	Apply 300 μ l of Reaction Buffer
14	Apply Coverslip
15	Warmup Slide to 37 Deg C
16	***** Procedure Synchronization *****
17	Warmup Slide to 37 Deg C
18	***** Hand Apply (Titration), and Incubate for [0 Hr 4 Min] *****
19	Rinse Slide With Reaction Buffer
20	Adjust Slide Volume With Reaction Buffer
21	Apply Coverslip
22	Rinse Slide With Reaction Buffer
23	Adjust Slide Volume With Reaction Buffer
24	Apply Coverslip
25	Warmup Slide to 37 Deg C
26	***** Hand Apply (Primary/Antibody), and Incubate for [0 Hr 16 Min] *****
27	Rinse Slide With Reaction Buffer
28	Adjust Slide Volume With Reaction Buffer
29	Apply Coverslip
30	Rinse Slide With Reaction Buffer
31	Adjust Slide Volume With Reaction Buffer
32	Apply One Drop of [COUNTERSTAIN 1] {Counterstain}, Apply Coverslip, and Incubate for [4 Minutes]
33	Rinse Slide With Reaction Buffer
34	Adjust Slide Volume With Reaction Buffer
35	Apply Coverslip
36	***** Start Timed Steps *****
37	Rinse Slide With Reaction Buffer
38	Rinse Slide With Reaction Buffer

* one drop is one reagent dispense

FIG. 11

23/78

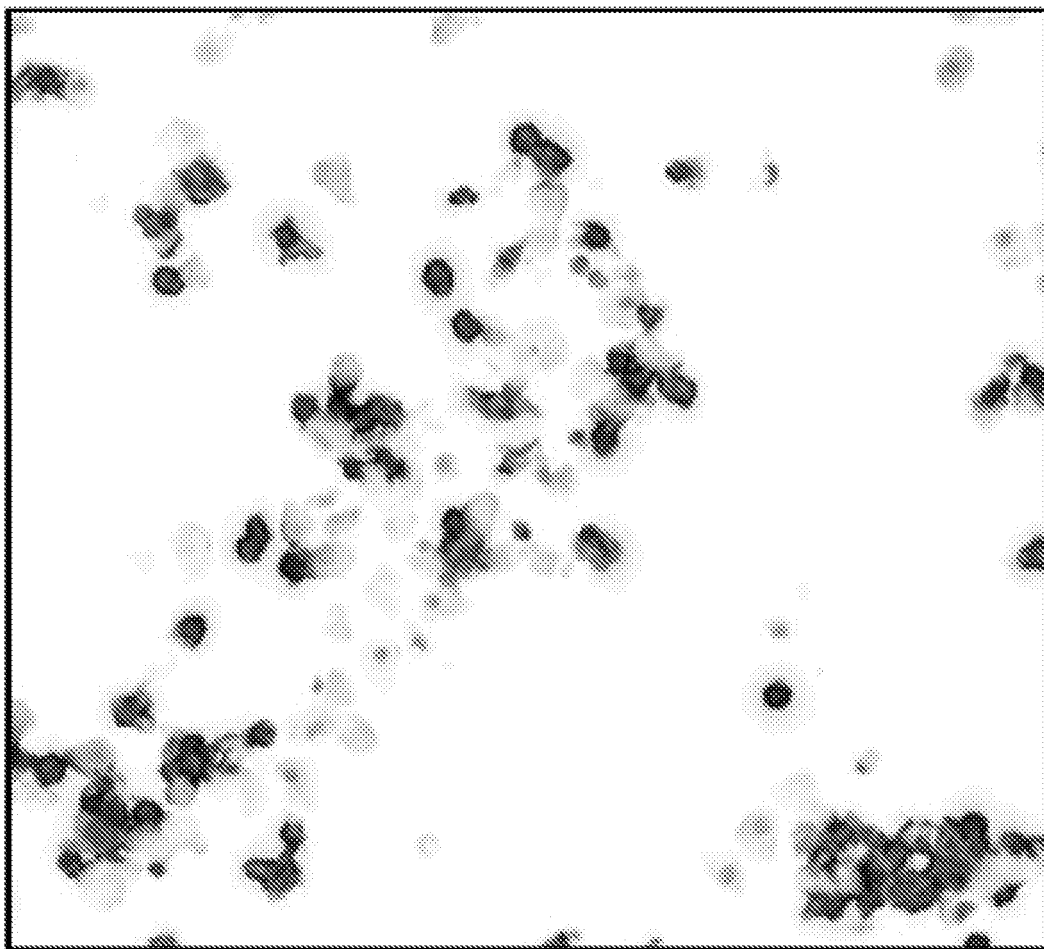


FIG.12

24/78

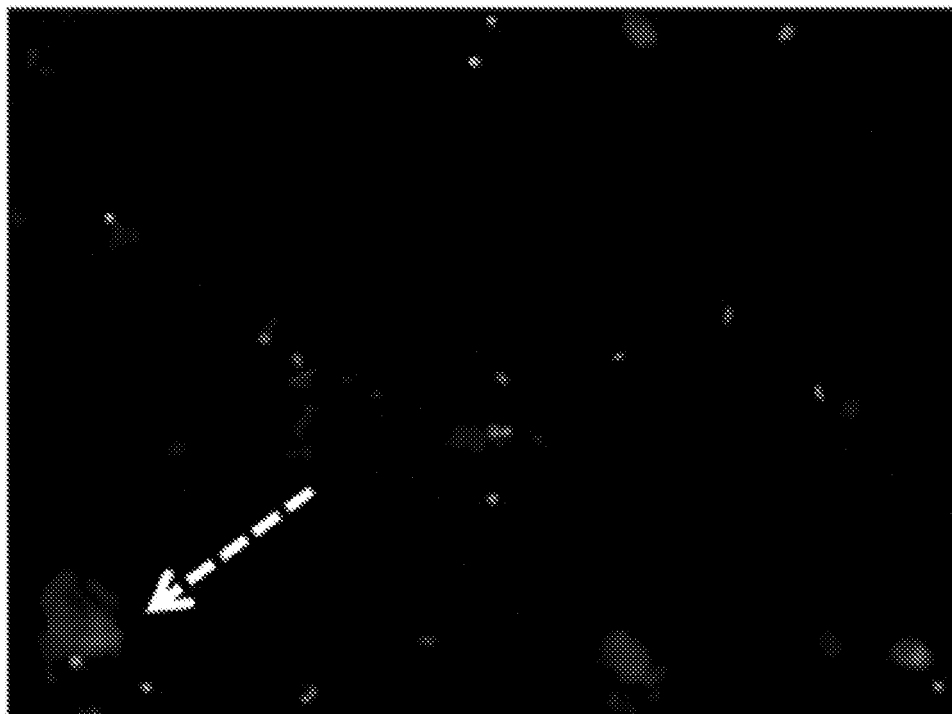


FIG. 13A

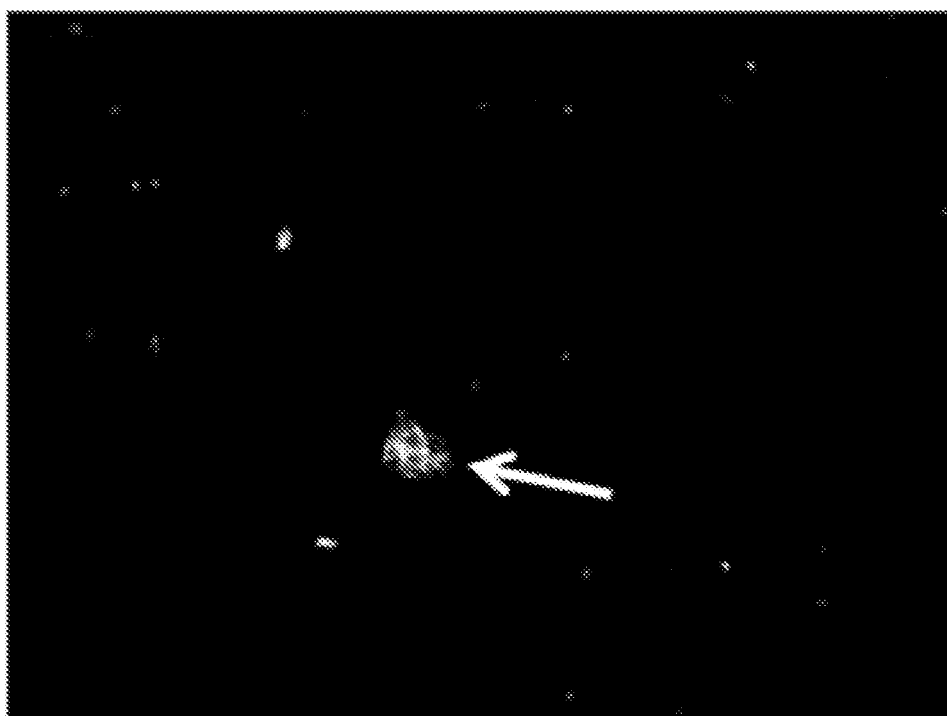


FIG. 13B

Protocol # 66 : Rep Dia BXT-multiplex (12/08/2015)
 Procedure: Res IHC MultiplexSequentialAP-ER
 BenchMark XT IHC/ISH Staining Module

25/78

Step No	Procedure Step
1	***** Select EZ Prep *****
2	***** Start Timed Steps *****
3	***** Mixers On *****
3	***** Mixers Off *****
5	Apply Long Cell Conditioner #1
6	Apply CC Coverslip Long
7	Warmup Slide to 90 Deg C, and Incubate for 4 Minutes
8	Apply Cell Conditioner #1
9	Incubate for [4 Minutes] {Cell Conditioner #1}
10	Disable Slide Heater
11	Incubate for [4 Minutes] {Cell Conditioner #1}
12	Apply 300µl of Reaction Buffer
13	Apply Coverslip
14	Warmup Slide to 37 Deg C
15	Disable Slide Heater
16	Incubate for 8 Minutes
17	Rinse Slide With Reaction Buffer
18	Adjust Slide Volume With Reaction Buffer
19	Apply Coverslip
20	***** Select SSC Wash *****
21	Warmup Slide to 37 Deg C, and Incubate for 4 Minutes
22	Rinse Slide With Reaction Buffer
23	Adjust Slide Volume With Reaction Buffer
24	Apply Coverslip
25	Apply One Drop of UV INHIBITOR, and Incubate for 4 Minutes
26	[Primary Antibody #1]
27	Rinse Slide With Reaction Buffer
28	Adjust Slide Volume With Reaction Buffer
29	Apply Coverslip
30	Apply One Drop of [Antibody 6] (Antibody), and Incubate for [16 Minutes]
31	Rinse Slide With Reaction Buffer
32	Adjust Slide Volume With Reaction Buffer
33	Apply Coverslip
34	Rinse Slide With Reaction Buffer
35	Adjust Slide Volume With Reaction Buffer
36	Apply Coverslip
37	[Research Fork #1 = Detection #1]
38	[Secondary Antibody #1]
39	[GAR/GAM HRP Enzyme]
40	Rinse Slide With Reaction Buffer
41	Adjust Slide Volume With Reaction Buffer
42	Apply One Drop of [DETECTION 11 (Detection #1), Apply Coverslip, and Incubate for [0 Hr 12 Min]
43	Rinse Slide With Reaction Buffer
44	Adjust Slide Volume With Reaction Buffer
45	Apply Coverslip

* one drop is one reagent dispense

FIG.14A

Protocol # 66 : Rep Dia BXT-multiplex (12/08/2015)
 Procedure: Res IHC MultiplexSequentialAP-ER
 BenchMark XT IHC/ISH Staining Module

26/78

Step No	Procedure Step
46	Rinse Slide With Reaction Buffer
47	Adjust Slide Volume With Reaction Buffer
48	Apply Coverslip
49	Rinse Slide With Reaction Buffer
50	Adjust Slide Volume With Reaction Buffer
51	Apply Coverslip
52	[Detection #1]
53	Tyr-TAMRA Purple Detection
54	Rinse Slide With Reaction Buffer
55	Adjust Slide Volume With Reaction Buffer
56	Apply Two Drops of FIXATIVE 1, Apply Coverslip, Incubate for 4 Minutes
57	Apply One Drop of OPTION 1, and Incubate for [0 Hr 32 Min]
58	Rinse Slide With Reaction Buffer
59	Adjust Slide Volume With Reaction Buffer
60	Rinse Slide With Reaction Buffer
61	Adjust Slide Volume With Reaction Buffer
62	Apply Coverslip
63	[Research Fork #11 - denaturation w/CC2 at 100C]
64	[Kill Step #1]
65	Rinse Slide With Reaction Buffer
66	Apply Short Cell Conditionner #2
67	Apply Coverslip
68	Warmup Slide to [95 Deg C], and incubate for [0 Hr 12 Min] {Extra Pretreatment # 1 Incubation}
69	Warmup Slide to 37 Deg C
70	Disable Slide Heater
71	Warmup Slide to 37 Deg C
72	Rinse Slide With Reaction Buffer
73	Adjust Slide Volume With Reaction Buffer
74	Apply Coverslip
75	[Primary antibody #2]
76	Rinse Slide With Reaction Buffer
77	Adjust Slide Volume With Reaction Buffer
78	Apply Coverslip
79	Apply One Drop of [ANTIBODY 3] (DS Antibody), and Incubate for [16 Minutes]
80	Rinse Slide With Reaction Buffer
81	Adjust Slide Volume With Reaction Buffer
82	Apply Coverslip
83	[Research Fork #2 - Detection #2]
84	[Secondary Antibody #2]
85	[GAR/GAM HRP enzyme conjugate]
86	Rinse Slide With Reaction Buffer
87	Adjust Slide Volume With Reaction Buffer
88	Apply One Drop of [DETECTION 13] (Detection #2), Apply Coverslip, and Incubate for [0 Hr 12 Min]
89	Rinse Slide With Reaction Buffer
90	Adjust Slide Volume With Reaction Buffer

* one drop is one reagent dispense

FIG. 14B

Protocol # 66 : Rep Dia BXT-multiplex (12/08/2015)
 Procedure: Res IHC MultiplexSequentialAP-ER
 BenchMark XT IHC/ISH Staining Module

27/78

Step No	Procedure Step
91	Apply Coverslip
92	Rinse Slide With Reaction Buffer
93	Adjust Slide Volume With Reaction Buffer
94	Apply Coverslip
95	Rinse Slide With Reaction Buffer
96	Adjust Slide Volume With Reaction Buffer
97	Apply Coverslip
98	[Detection #2]
99	[Tyr-Rhodamine Detection]
100	Adjust Slide Volume With Reaction Buffer
101	Apply Two Drops of FIXATIVE 10, Apply Coverslip, Incubate for 4 Minutes
102	Apply One Drop of OPTION 1, and Incubate for [0 Hr 32 Min]
103	Rinse Slide With Reaction Buffer
104	Adjust Slide Volume With Reaction Buffer
105	Apply Coverslip
106	Rinse Slide With Reaction Buffer
107	Adjust Slide Volume With Reaction Buffer
108	Apply Coverslip
109	[Research Fork #12 - Denaturation w/CC2 at 100C]
110	[Kill Step #2]
111	Rinse Slide With Reaction Buffer
112	Apply Short Cell Conditioner #2
113	Apply Coverslip
114	Warmup Slide to [95 Deg C], and Incubate for [0 Hr 12 Min] (Extra Pretreatment #2 Incubation)
115	Warmup Slide to 37 Deg C
116	Disable Slide Heater
117	Warmup Slide to 37 Deg C
118	Rinse Slide With Reaction Buffer
119	Adjust Slide Volume With Reaction Buffer
120	Apply Coverslip
121	[Primary Antibody #3]
122	Rinse Slide With Reaction Buffer
123	Adjust Slide Volume With Reaction Buffer
124	Apply Coverslip
125	Apply One Drop of [ANTIBODY 2] (DS Primary Antibody), and Incubate for [16 Minutes]
126	Rinse Slide With Reaction Buffer
127	Adjust Slide Volume With Reaction Buffer
128	Apply Coverslip
129	[Research Fork #3 - Detetion #3]
130	[Secondary Antibody #3]
131	[GAR/GAM AP enzyne conjugate]
132	Rinse Slide With Reaction Buffer
133	Adjust Slide Volume With Reaction Buffer
134	Apply One Drop of [DETECTION 12] (Detection #3), Apply Coverslip, and Incubate for [0 Hr 12 Min]
135	Adjust Slide Volume With Reaction Buffer

* one drop is one reagent dispense

FIG.14C

Protocol # 66 : Rep Dia BXT–multiplex (12/08/2015)
 Procedure: Res IHC MultiplexSequentialAP–ER
 BenchMark XT IHC/ISH Staining Module

28/78

Step No	Procedure Step
136	Rinse Slide With Reaction Buffer
137	Apply Coverslip
138	Rinse Slide
139	Adjust Slide Volume
140	Apply Coverslip
141	Rinse Slide
142	Adjust Slide Volume
143	Apply Coverslip
144	[Detection #3]
145	[CM AP Chromogen Detection]
146	Rinse Slide
147	Adjust Slide Volume
148	Apply Two Drops of OPTION 2, Apply Coverslip, and Incubate for 0 Hr 4 Min
149	[Apply One Drop of [FIXATIVE 4] (DS Post Fixative), and Incubate for [0 Hr 32 Min]
150	Rinse Slide With Reaction Buffer
151	Adjust Slide Volume With Reaction Buffer
152	Apply Coverslip
153	Rinse Slide With Reaction Buffer
154	Adjust Slide Volume With Reaction Buffer
155	Apply Coverslip
156	[Research Fork #13 – Denaturation w/CC2 at 100C]
157	[Kill Step #3]
158	Rinse Slide With Reaction Buffer
159	Apply Short Cell Conditioner #2
160	Apply Coverslip
161	Warmup Slide to [95 Deg C], and Incubate for [0 Hr 12 Min] (Extra Pretreatment #3 Incubation)
162	Warmup Slide to 37 Deg C
163	Disable Slide Heater
164	Warmup Slide to 37 Deg C
165	Rinse Slide With Reaction Buffer
166	Adjust Slide Volume With Reaction Buffer
167	Apply Coverslip
168	[Primary Antibody #4]
169	Rinse Slide With Reaction Buffer
170	Adjust Slide Volume With Reaction Buffer
171	Apply Coverslip
172	[Apply One Drop of [ANTIBODY 4] (2nd Antibody), and Incubate for [15 Minutes]
173	Rinse Slide With Reaction Buffer
174	Adjust Slide Volume With Reaction Buffer
175	Apply Coverslip
176	Rinse Slide With Reaction Buffer
177	Adjust Slide Volume With Reaction Buffer
178	Apply Coverslip
179	[Research Fork #4 – Detection #4]
180	[Secondary Ab #4]

* one drop is one reagent dispense

FIG.14D

Protocol # 66 : Rep Dia BXT-multiplex (12/08/2015)
 Procedure: Res IHC MultiplexSequentialAP-ER
 BenchMark XT IHC/ISH Staining Module

29/78

Step No	Procedure Step
181	[GAR/GAM AP enzyme conjugate]
182	Rinse Slide With Reaction Buffer
183	Adjust Slide Volume With Reaction Buffer
184	Apply One Drop of [DETECTION 2] (Detection #4), Apply Coverslip, and Incubate for [0 Hr 12 Min]
185	Rinse Slide With Reaction Buffer
186	Adjust Slide Volume With Reaction Buffer
187	Apply Coverslip
188	Rinse Slide
189	Adjust Slide Volume
190	Apply Coverslip
191	Rinse Slide
192	Adjust Slide Volume
193	Apply Coverslip
194	[Detection #4]
195	[CM AP Chromogen Detection]
196	Rinse Slide
197	Adjust Slide Volume
198	Apply Two Drops of OPTION 2, Apply Coverslip, and Incubate for 0 Hr 4 Min
199	Apply One Drop of [FIXATIVE 2], (Pre-Fixative), and Incubate for [0 Hr 32 Min]
200	Rinse Slide With Reaction Buffer
201	Adjust Slide Volume With Reaction Buffer
202	Apply Coverslip
203	Rinse Slide With Reaction Buffer
204	Adjust Slide Volume With Reaction Buffer
205	Apply Coverslip
206	Rinse Slide With Reaction Buffer
207	Adjust Slide Volume With Reaction Buffer
208	Apply Coverslip
209	Disable Slide Heater
210	***** Mixers Off *****
211	***** Mixers On *****
212	***** Select EZ Prep *****
213	Warmup Slide to 37 Deg C, and Incubate for 4 Minutes
214	Rinse Slide With Reaction Buffer
215	Adjust Slide Volume With Reaction Buffer
216	Apply One Drop of [COUNTERSTAIN 1] (Counterstain), Apply Coverslip, and Incubate for [4 Minutes]
217	Rinse Slide With Reaction Buffer
218	Adjust Slide Volume With Reaction Buffer
219	Apply Coverslip
220	Rinse Slide With Reaction Buffer
221	Adjust Slide Volume With Reaction Buffer
222	Apply One Drop of [BLUING REAGENT] (Post Counterstain), Apply Coverslip, and Incubate for [4 Minutes]
223	Rinse Slide With Reaction Buffer
224	Adjust Slide Volume With Reaction Buffer
225	Apply Coverslip

* one drop is one reagent dispense

FIG. 14E

30/78

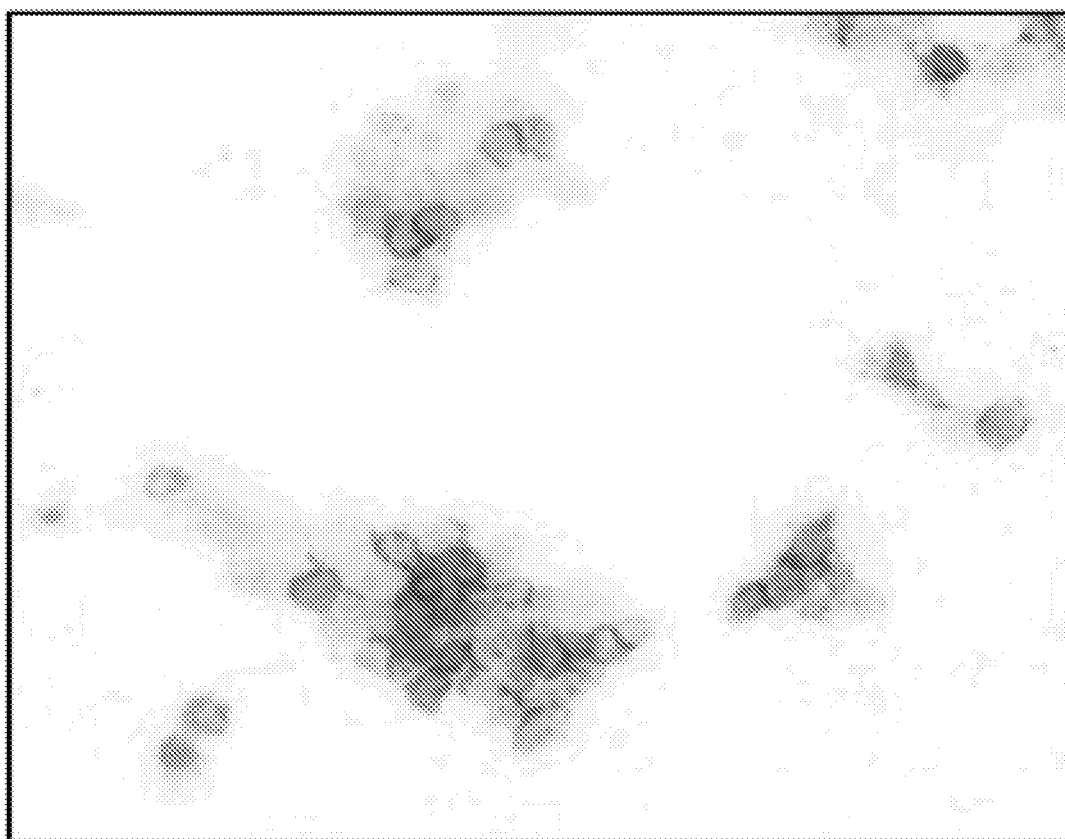


FIG.15

31/78

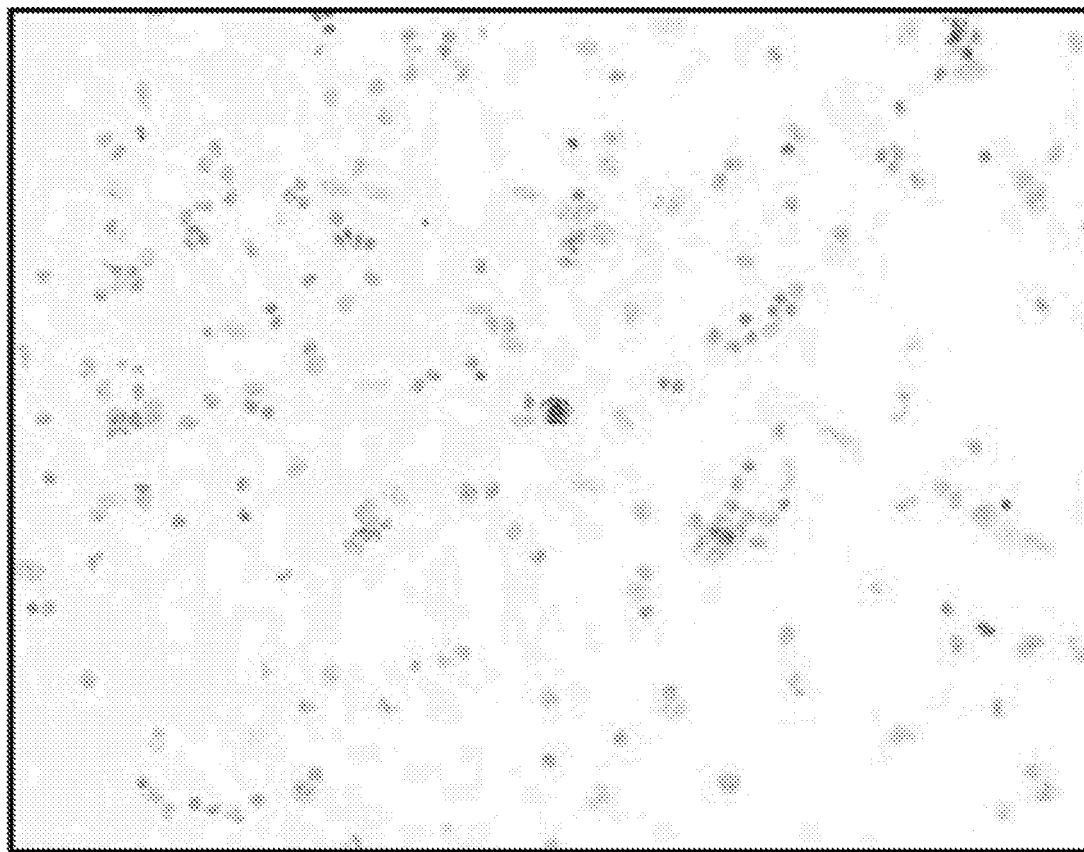


FIG.16

32/78

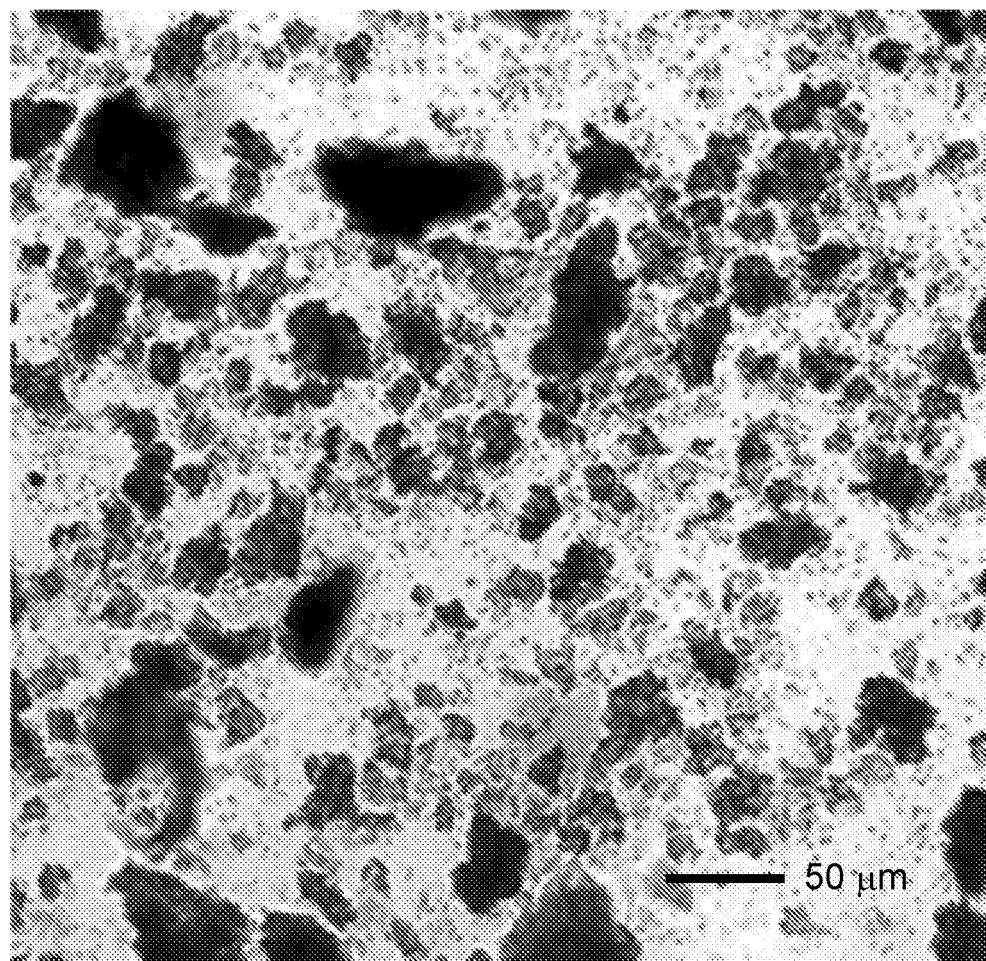


FIG.17

33/78

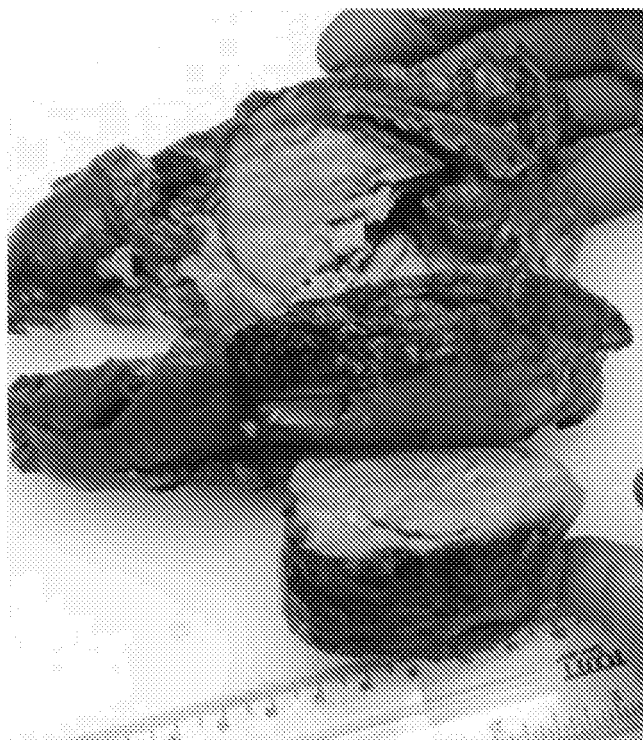


FIG. 18A



FIG. 18B

34/78

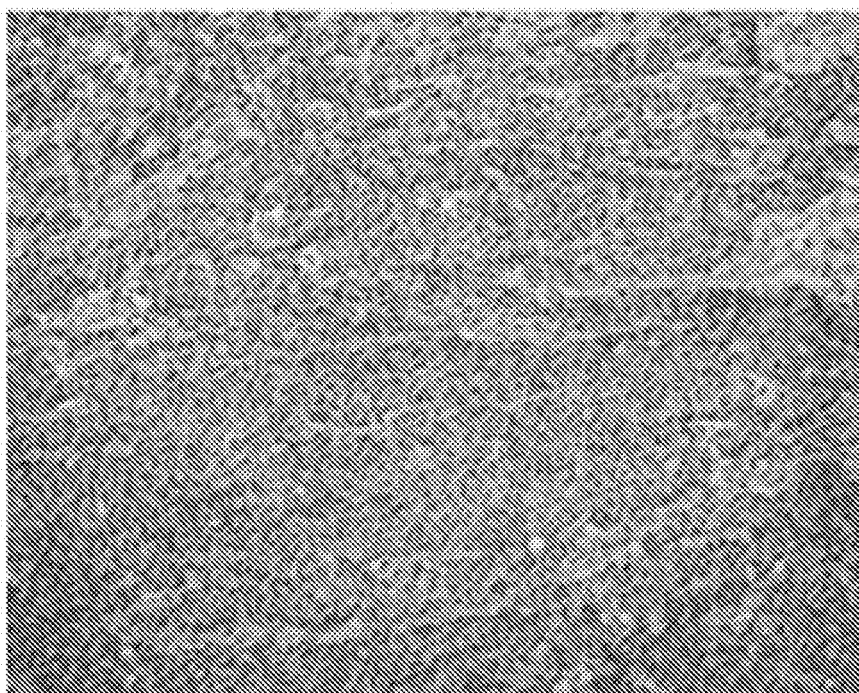


FIG. 19A

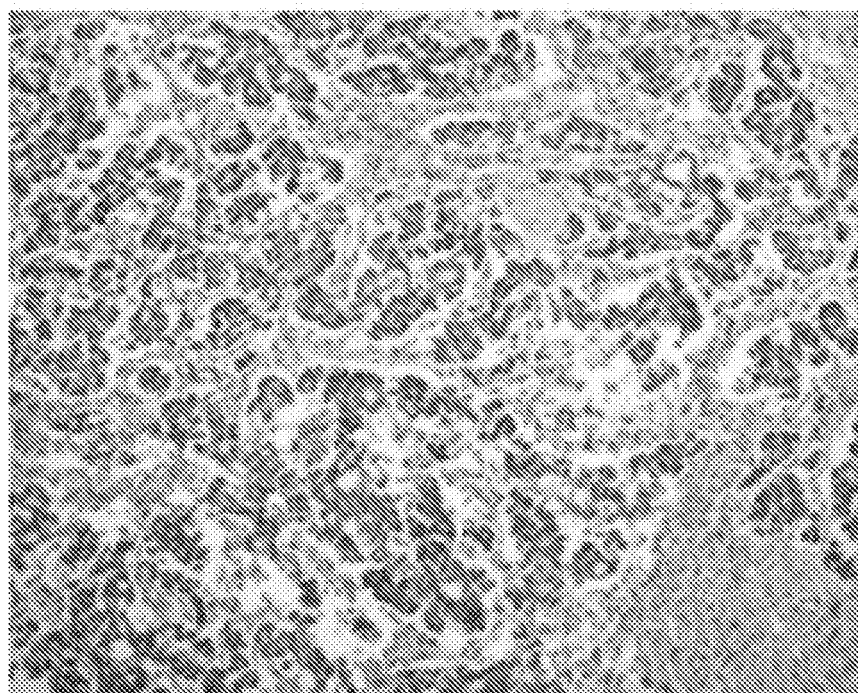


FIG. 19B

35/78

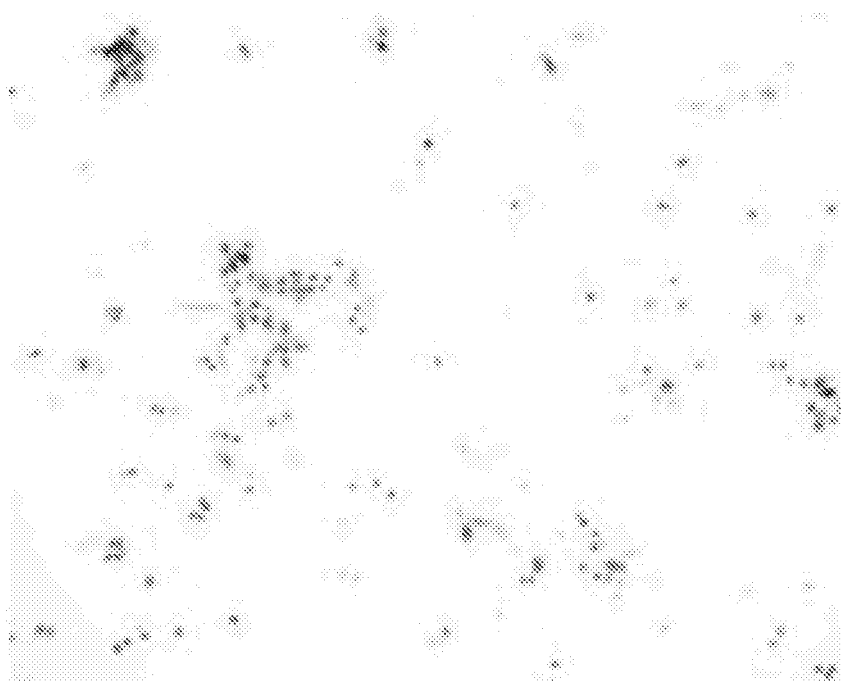


FIG.19C

36/78

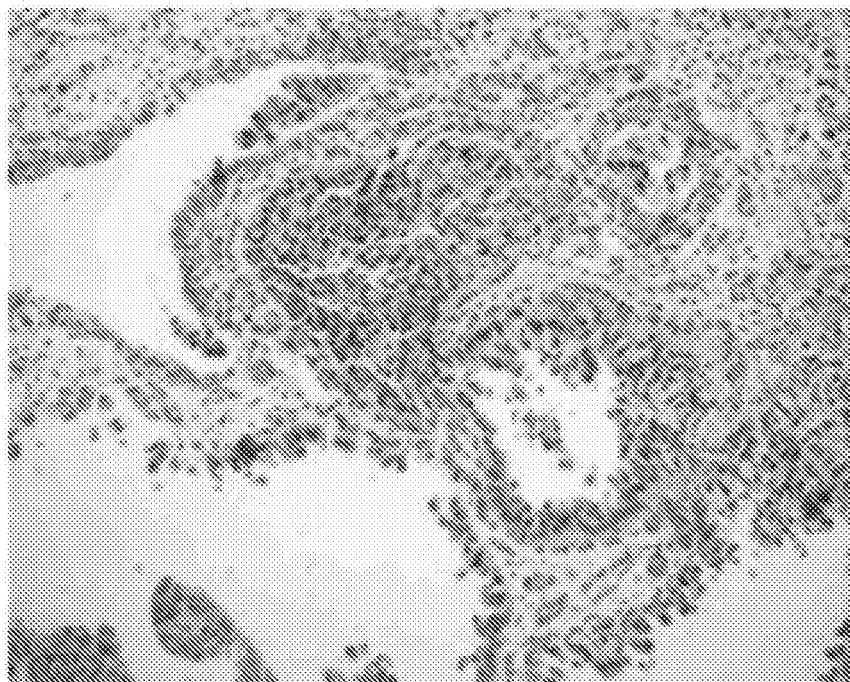


FIG.20A

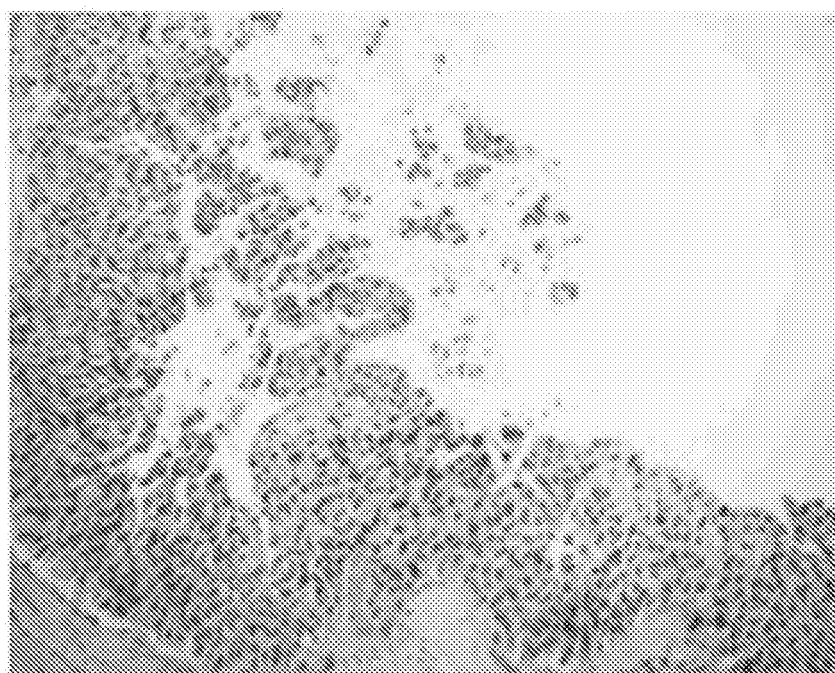


FIG.20B

37/78

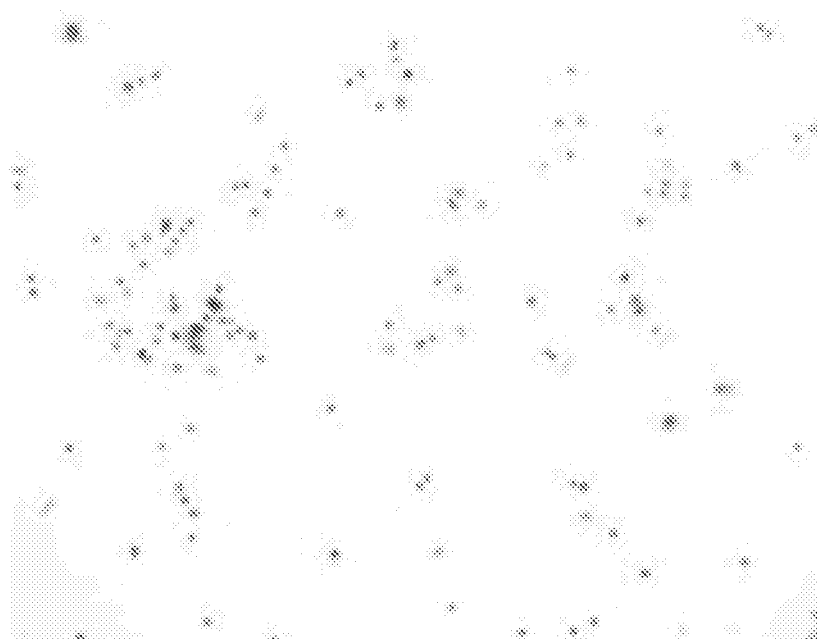


FIG.20C

38/78



FIG.21A

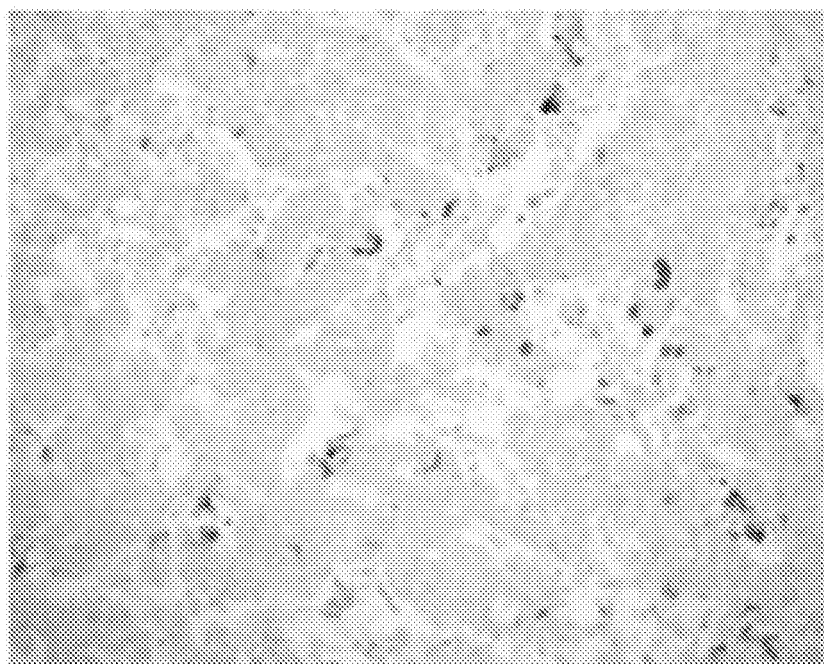


FIG.21B

39/78

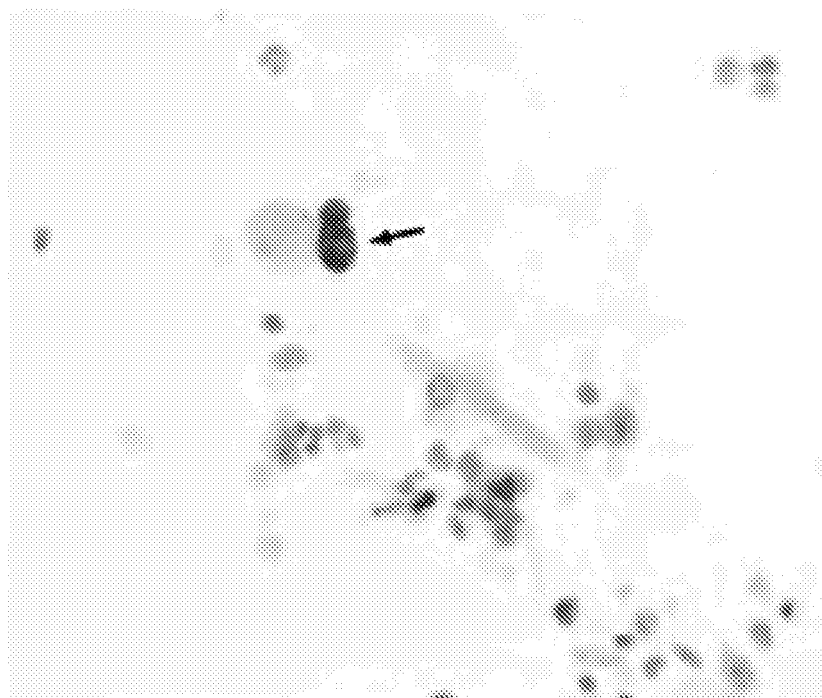


FIG.21C

40/78

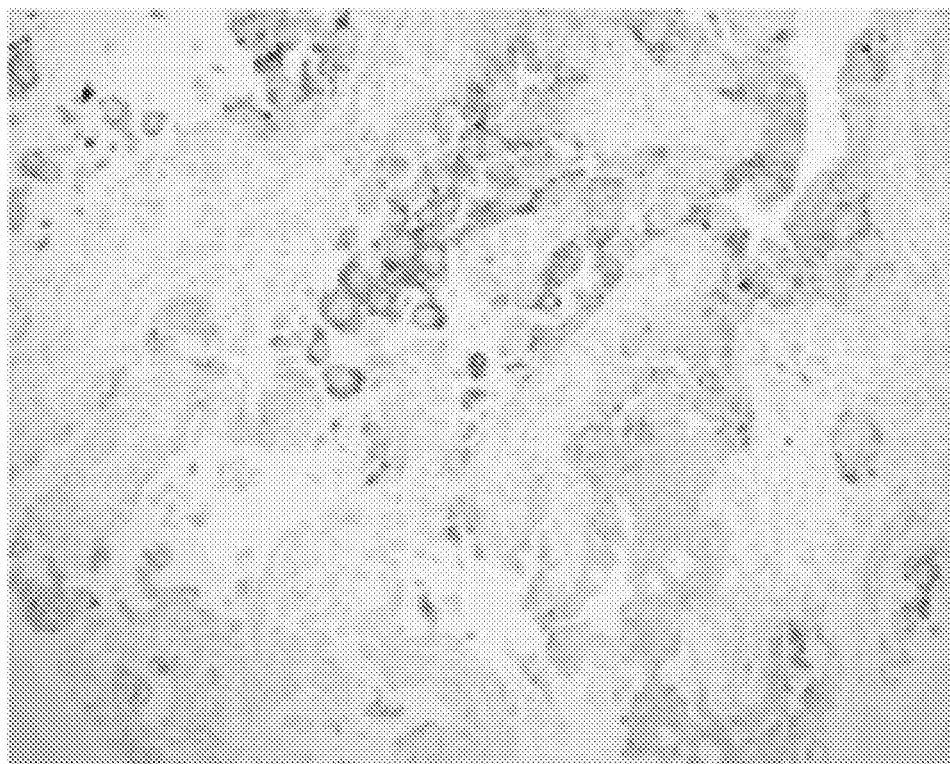


FIG.22A

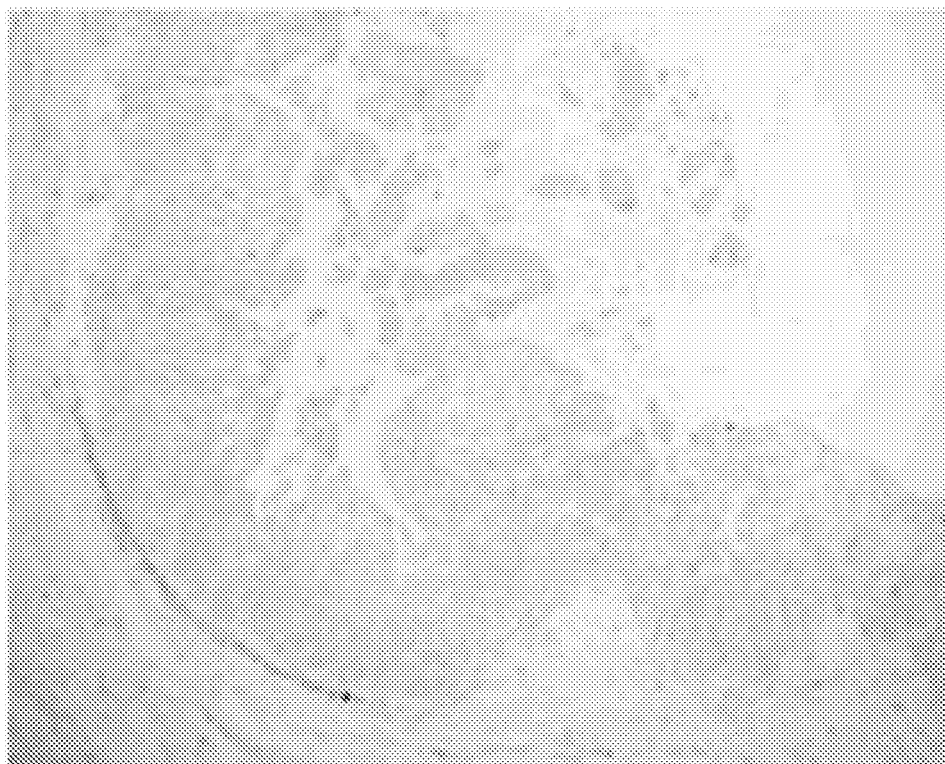


FIG.22B

41/78

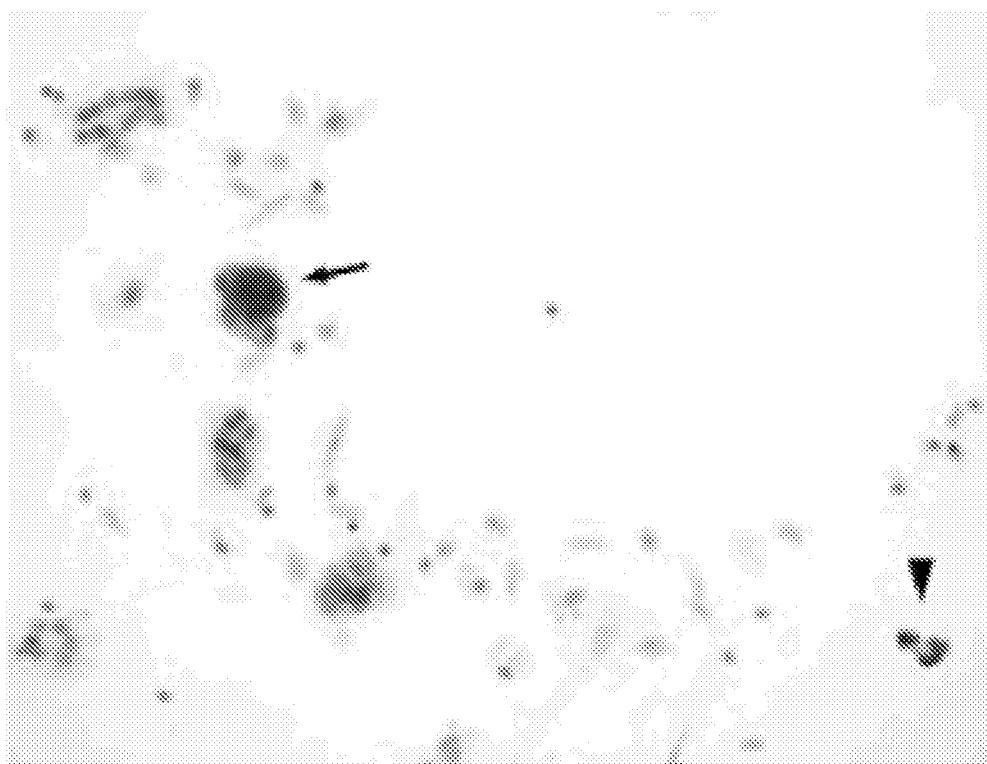


FIG.22C

42/78

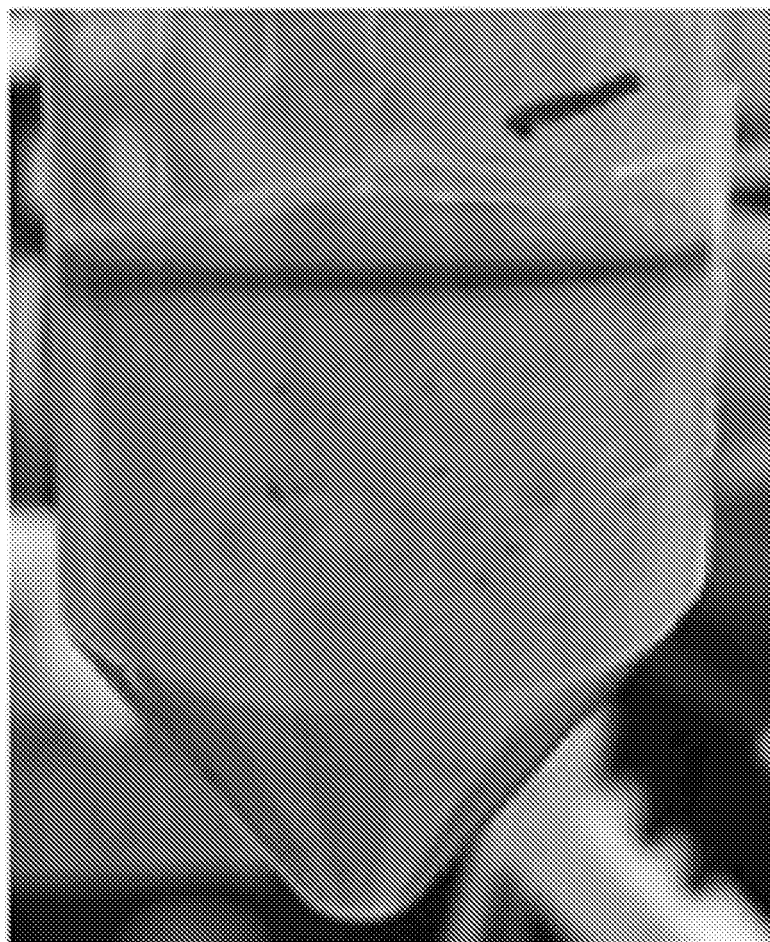


FIG.23

43/78

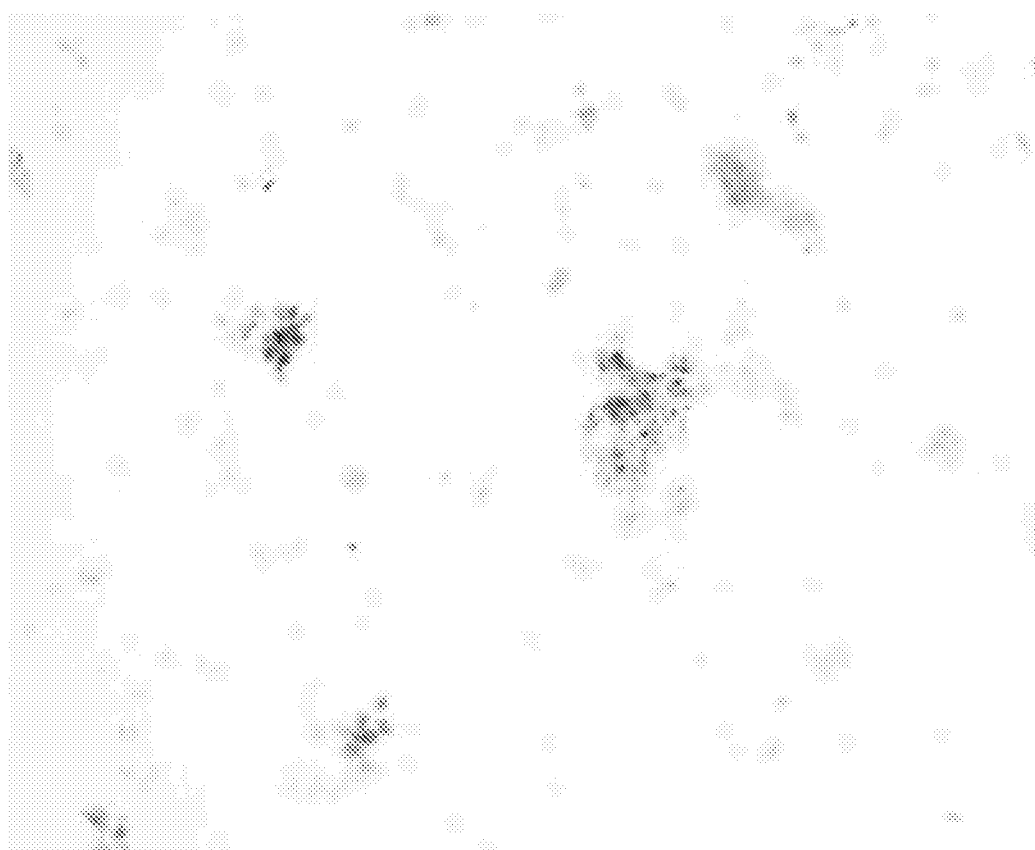


FIG.24

44/78

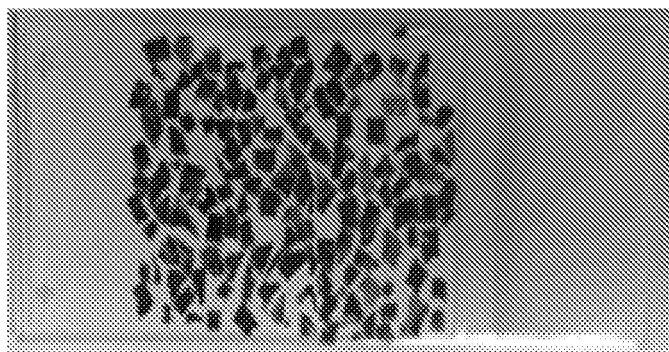


FIG.25A

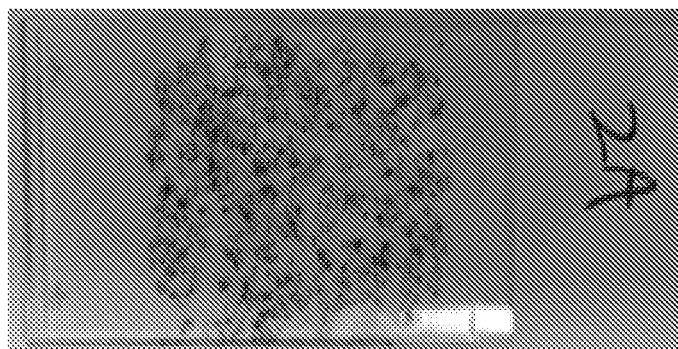


FIG.25B



FIG.25C



FIG.25B

45/78

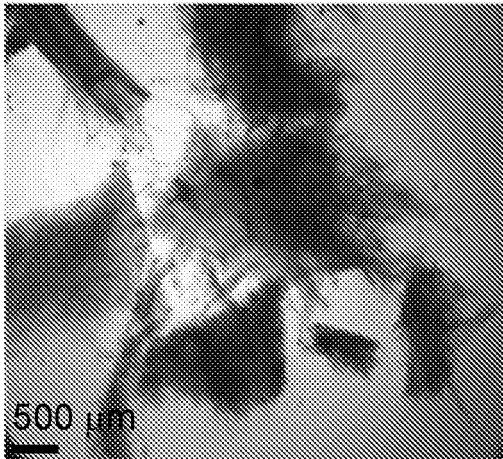


FIG. 26A

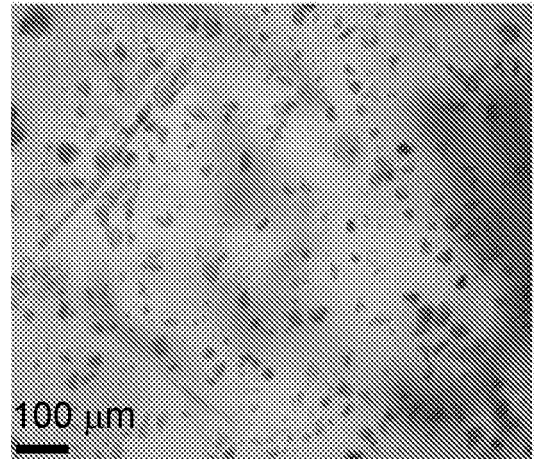


FIG. 26B

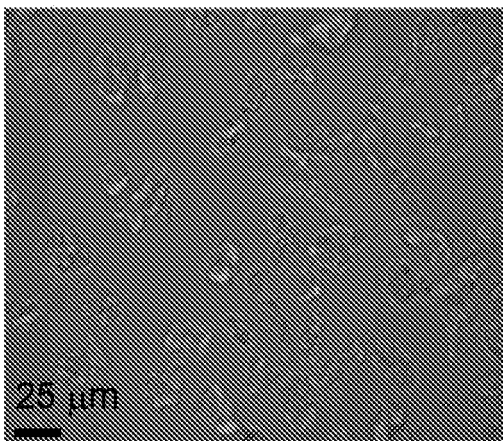


FIG. 26C

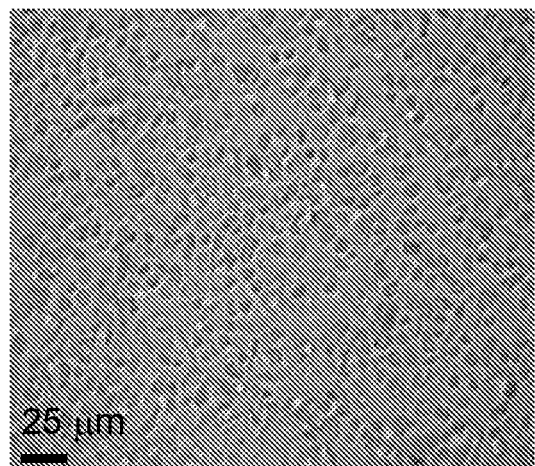


FIG. 26D

46/78

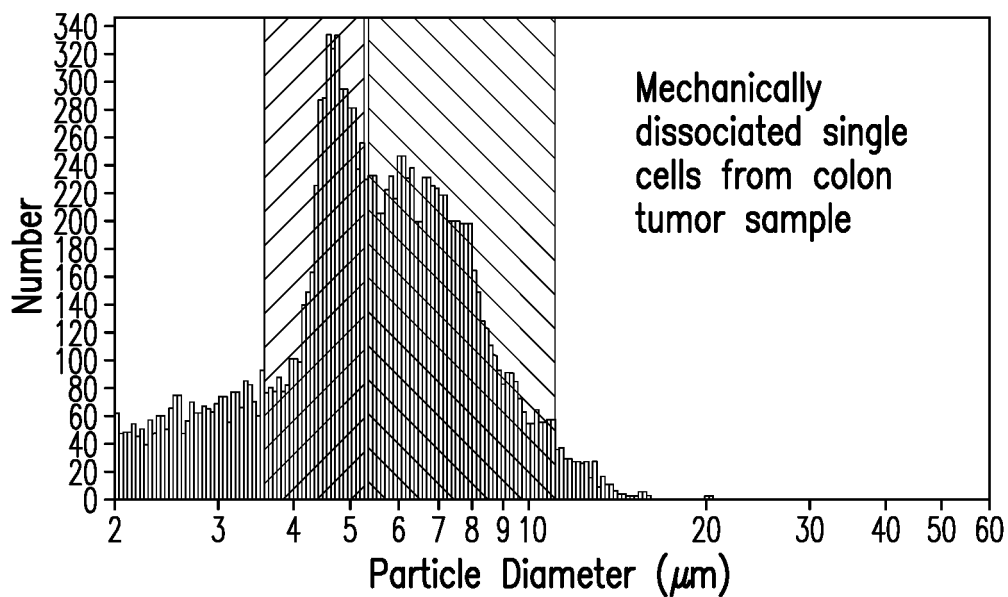


FIG.27A

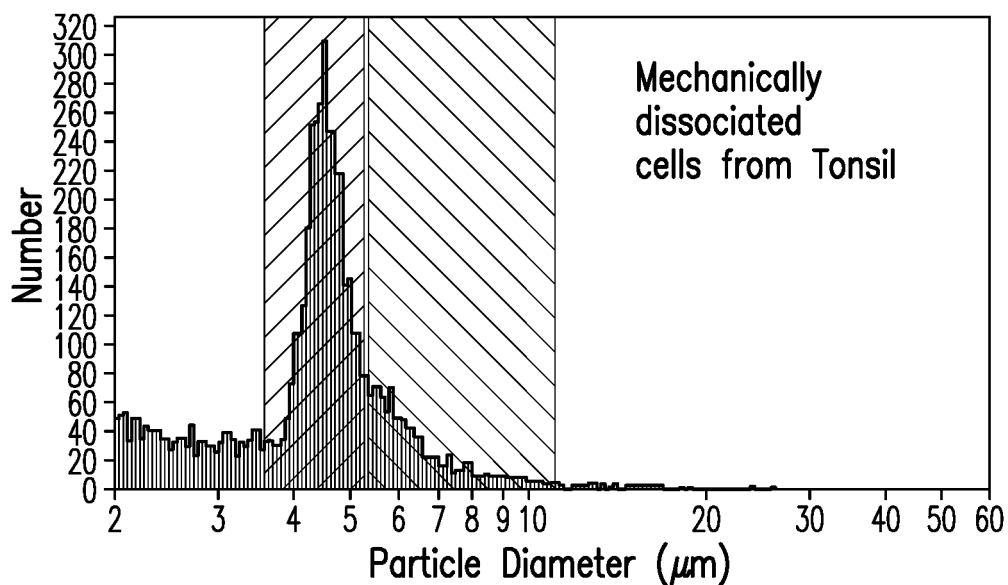


FIG.27B

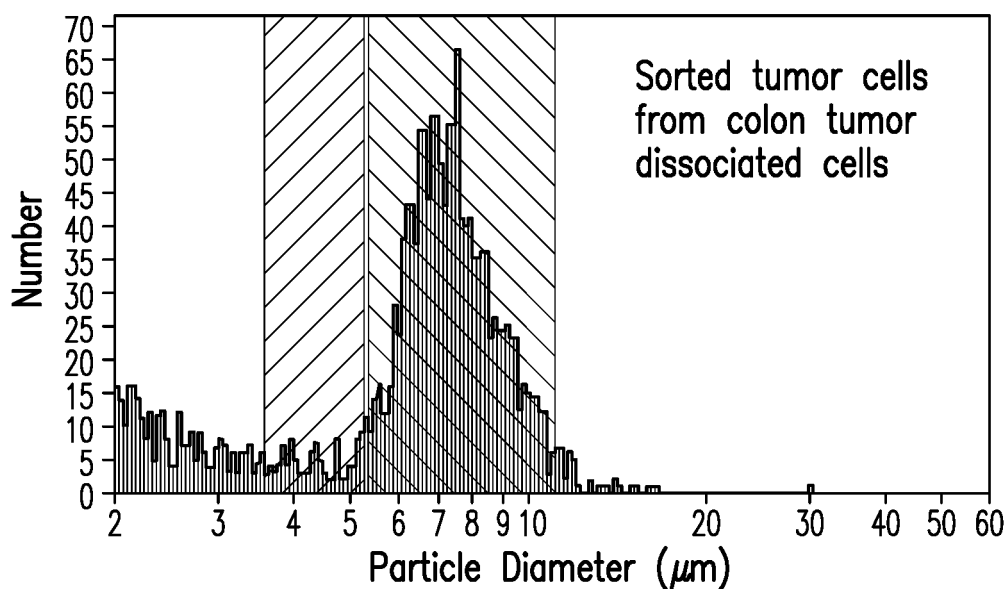


FIG.27C

47/78

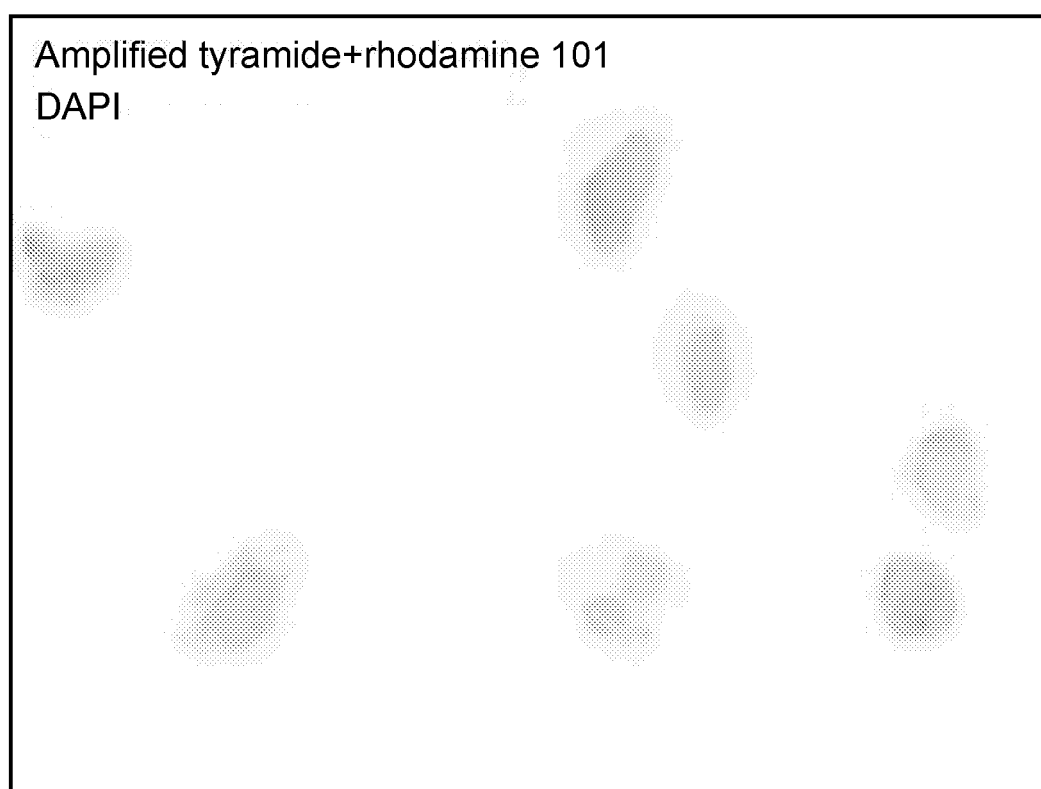


FIG.28

48/78

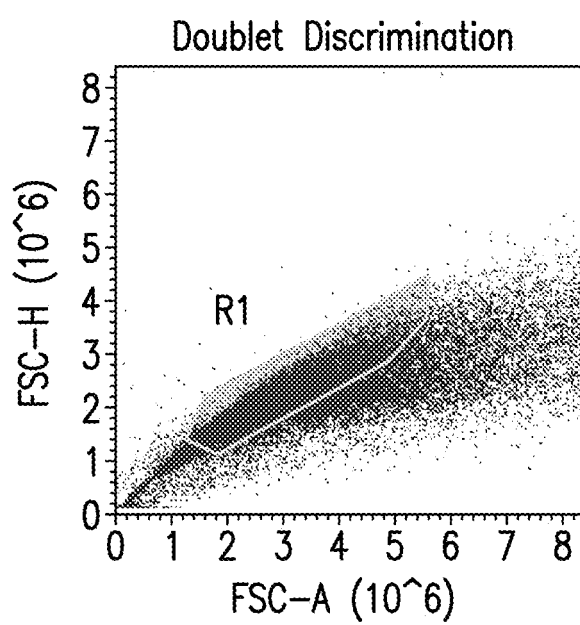


FIG.29A

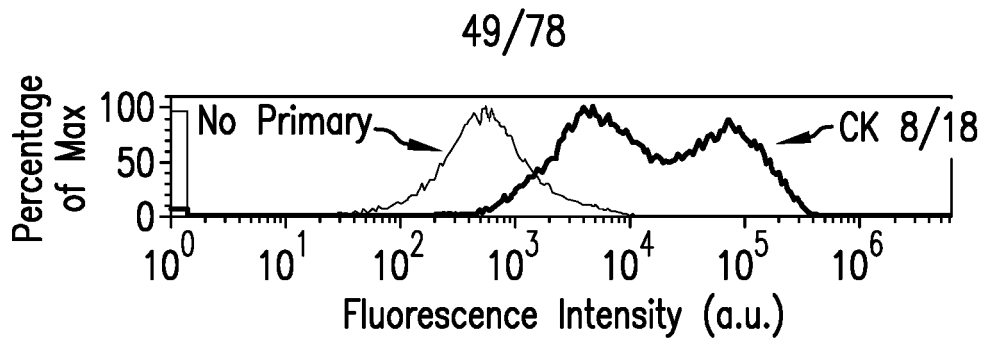


FIG. 29B

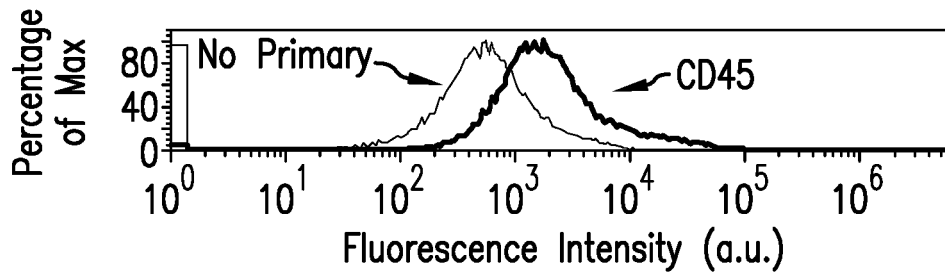


FIG. 29C

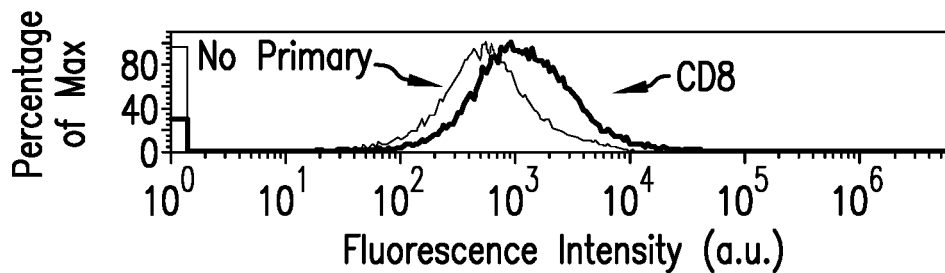


FIG. 29D

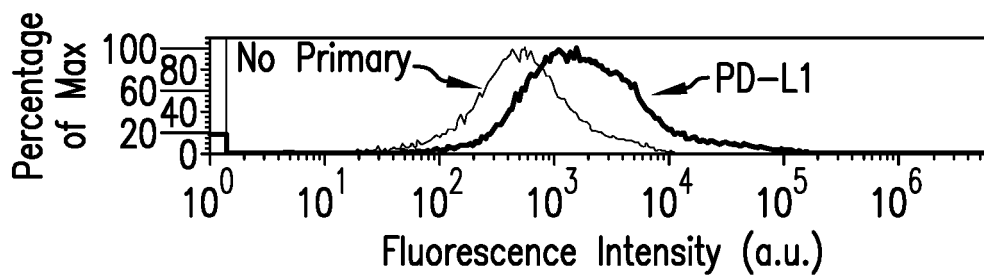


FIG. 29E

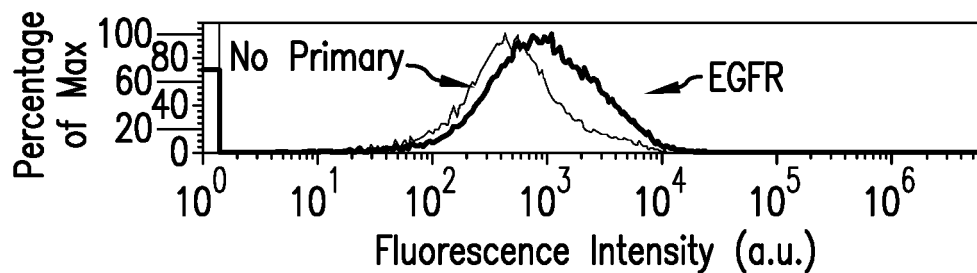
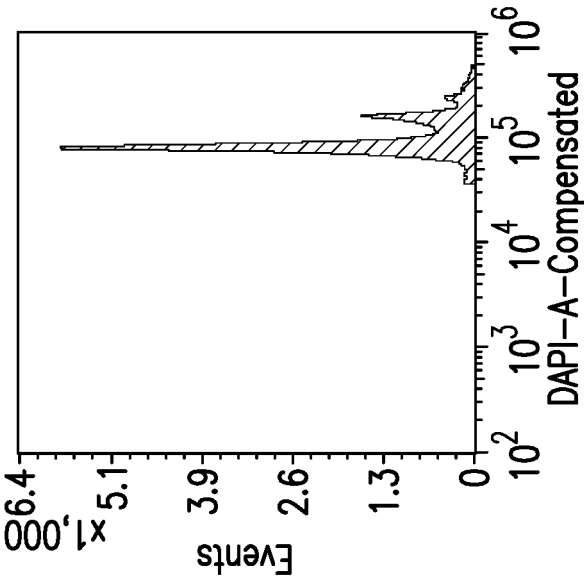
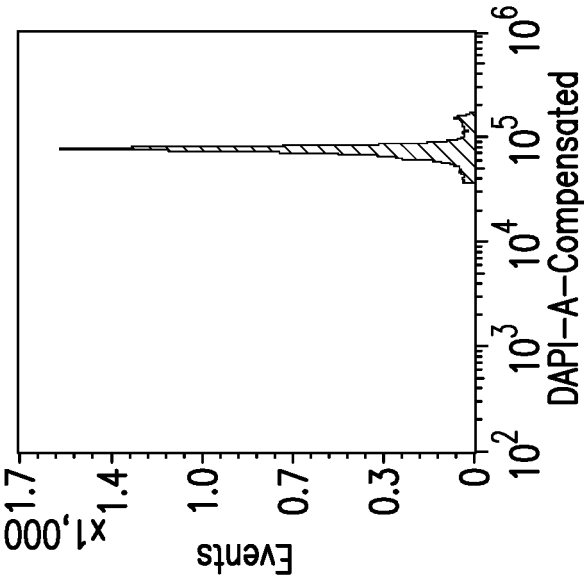
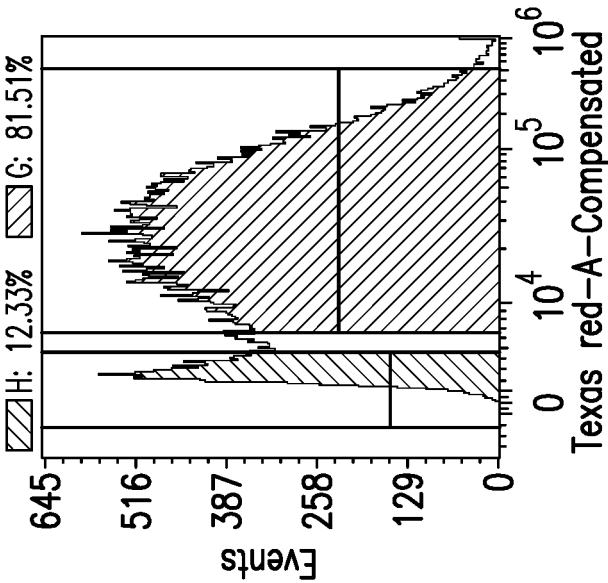


FIG. 29F



51/78

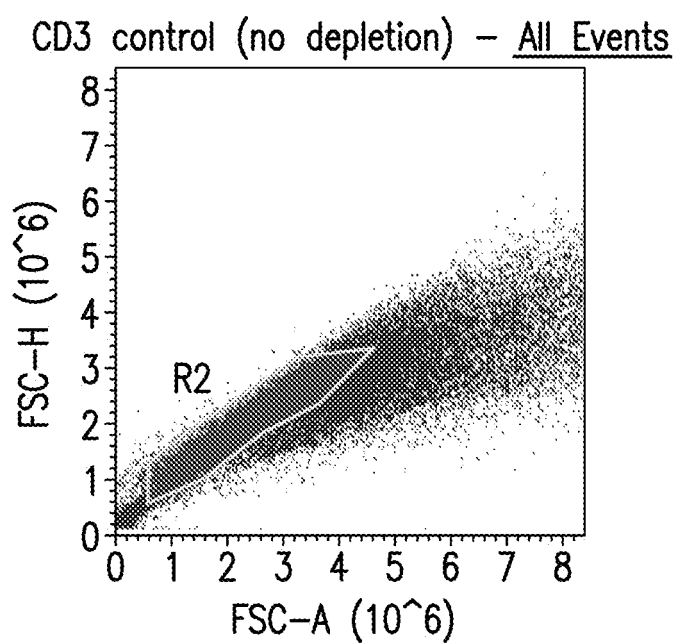


FIG.31A

52/78

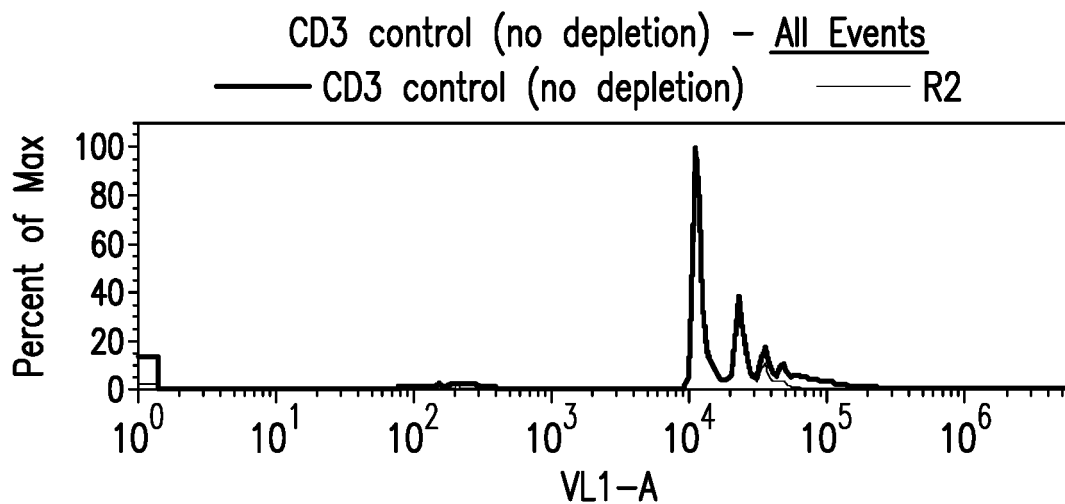


FIG.31B

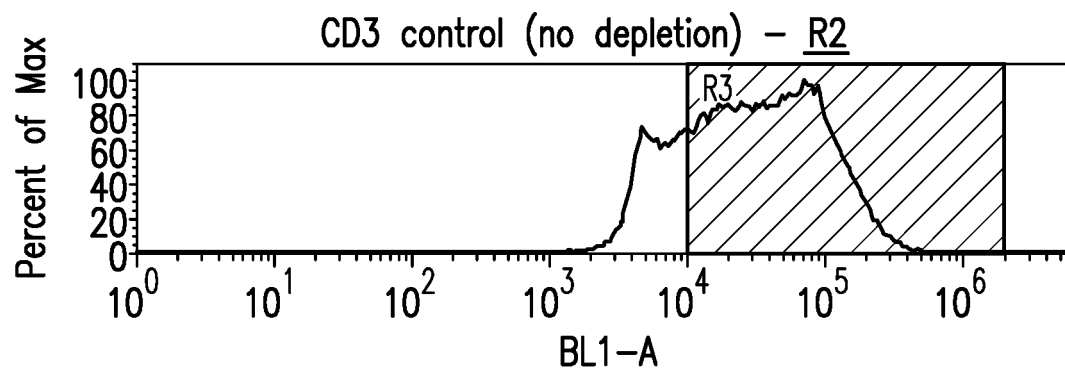


FIG.31C

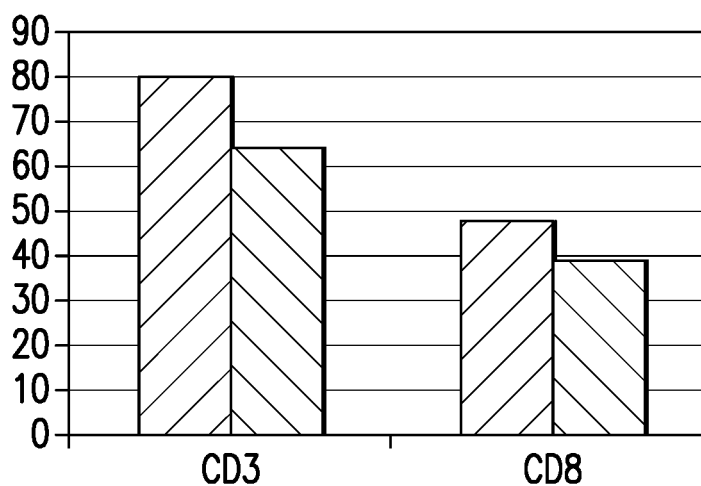
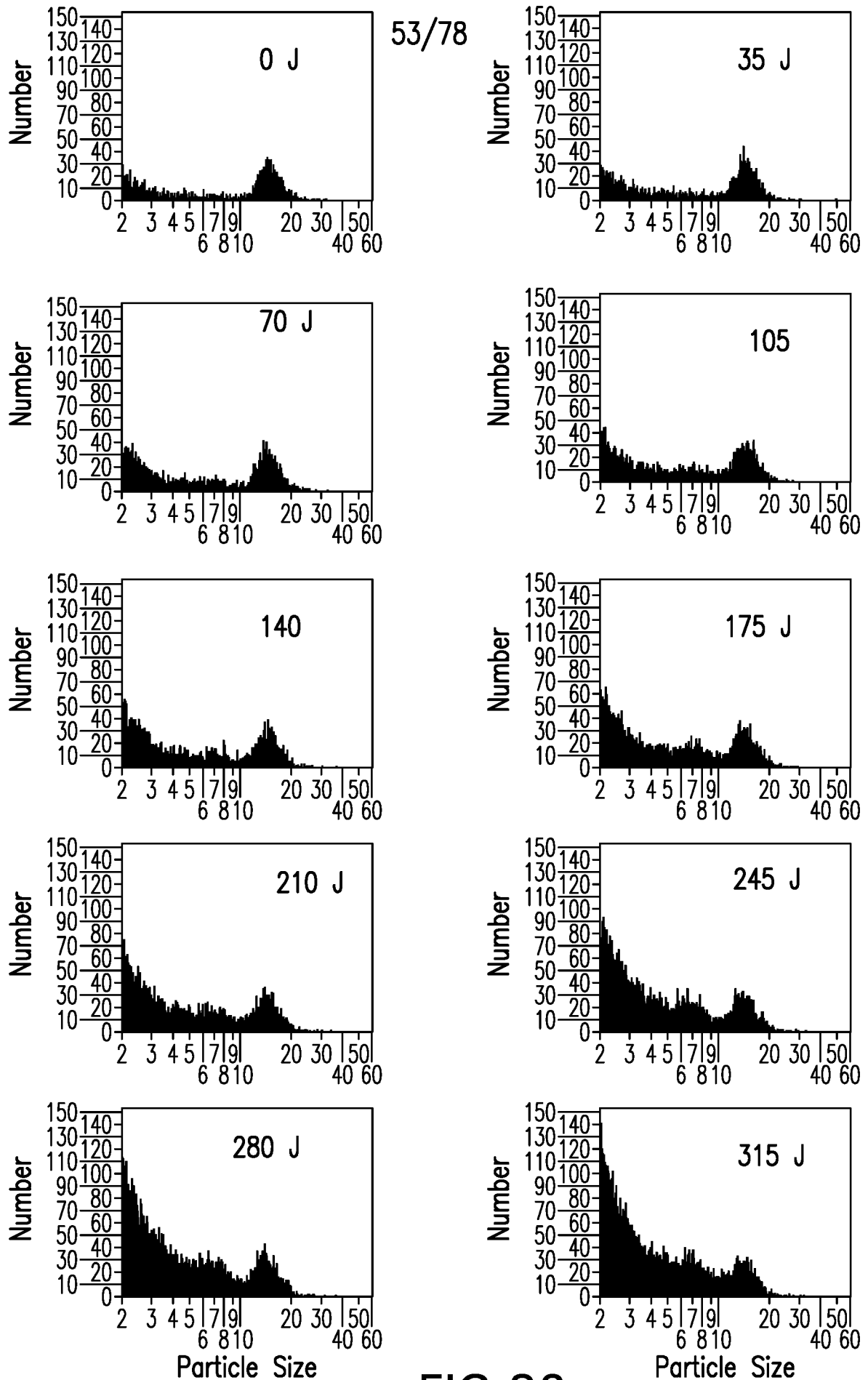


FIG.31D



54/78

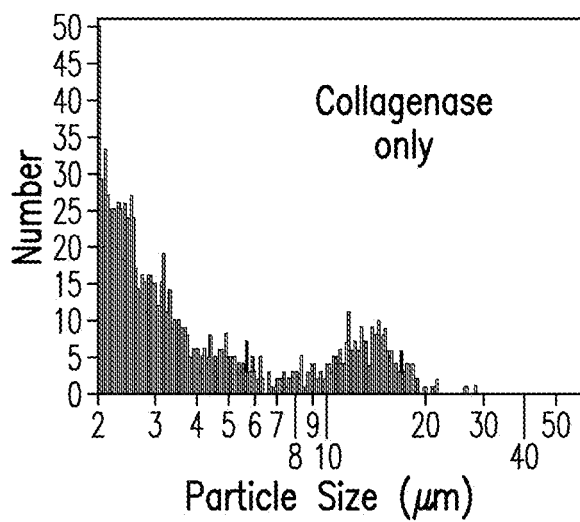


FIG.33A

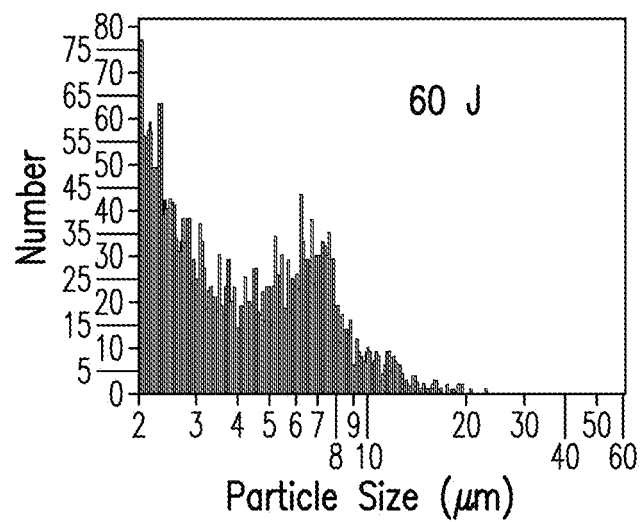


FIG.33B

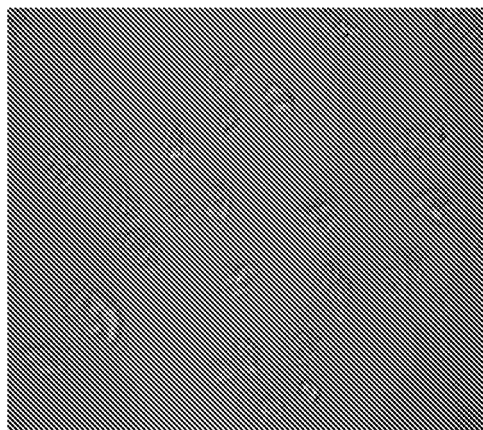


FIG.33C

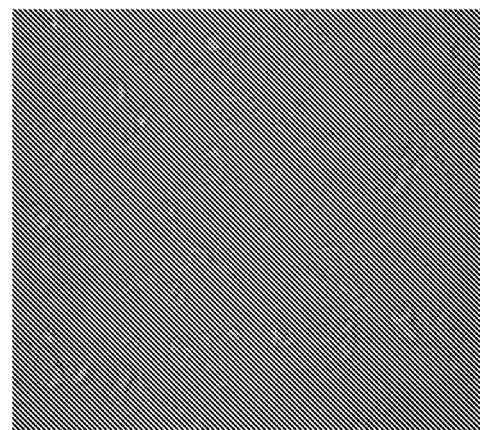


FIG.33D

55/78

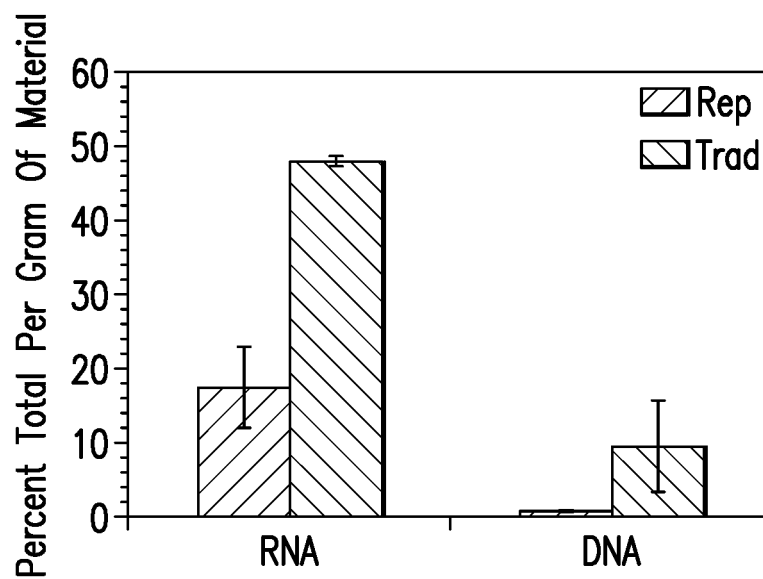


FIG.34

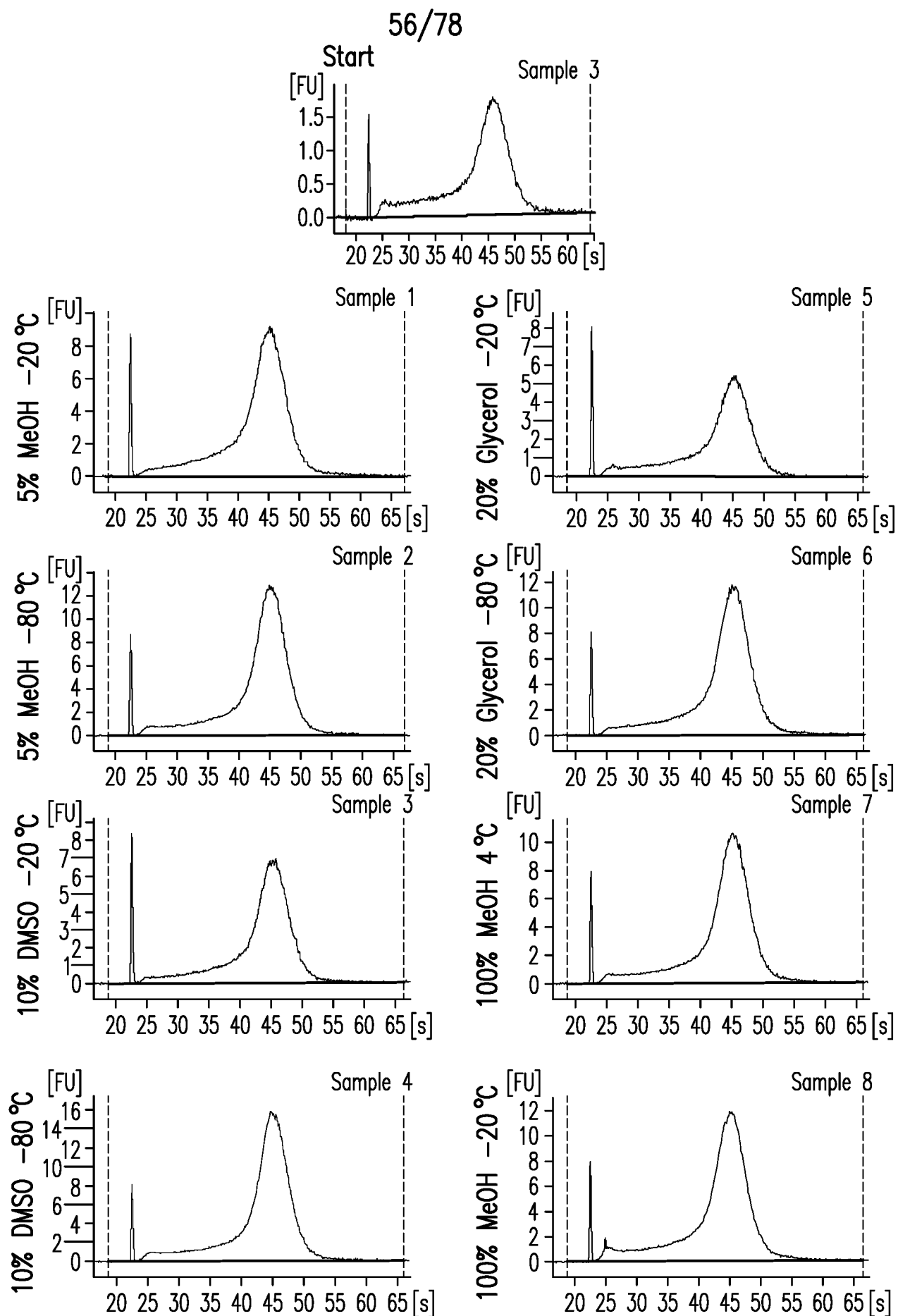


FIG.35A

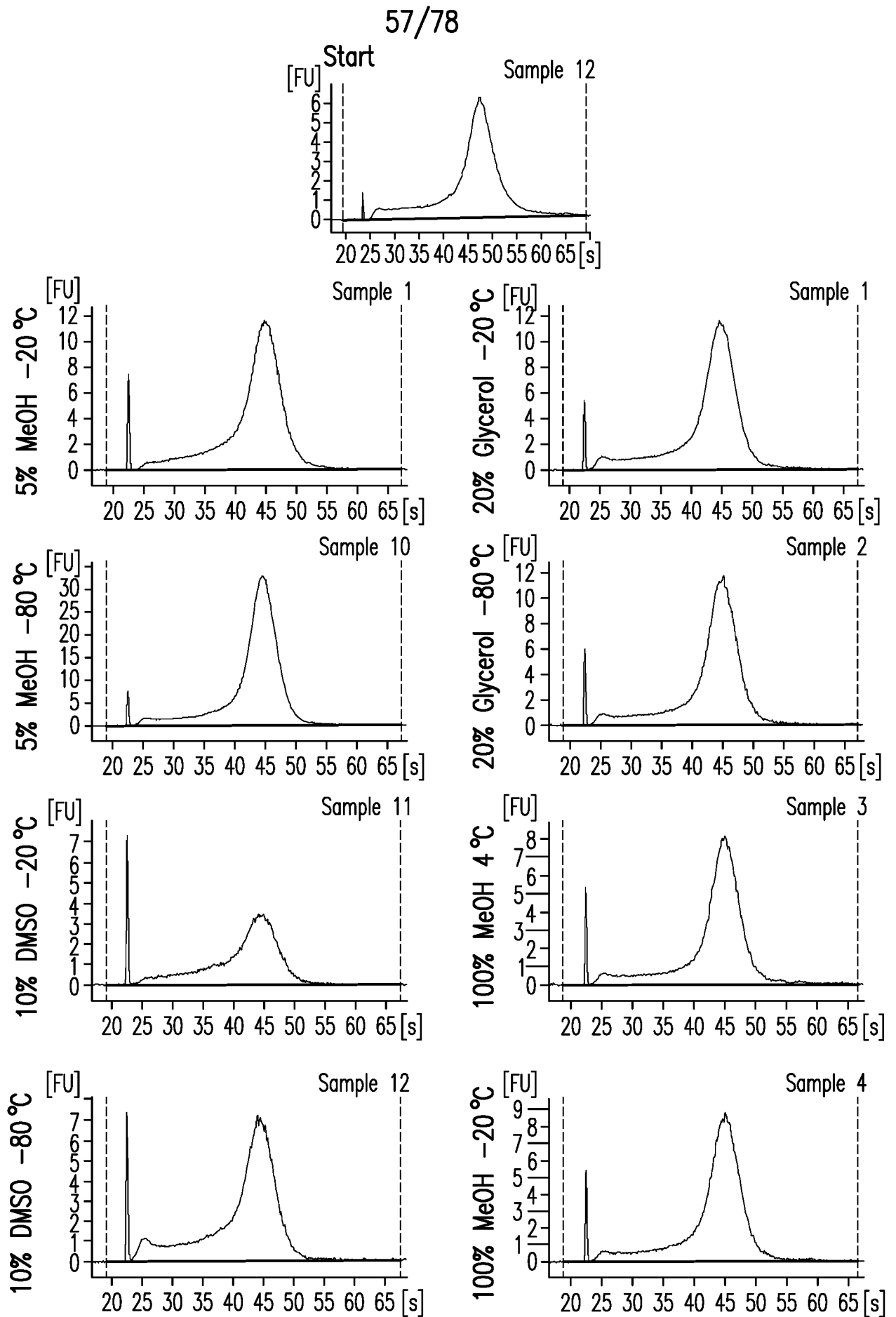
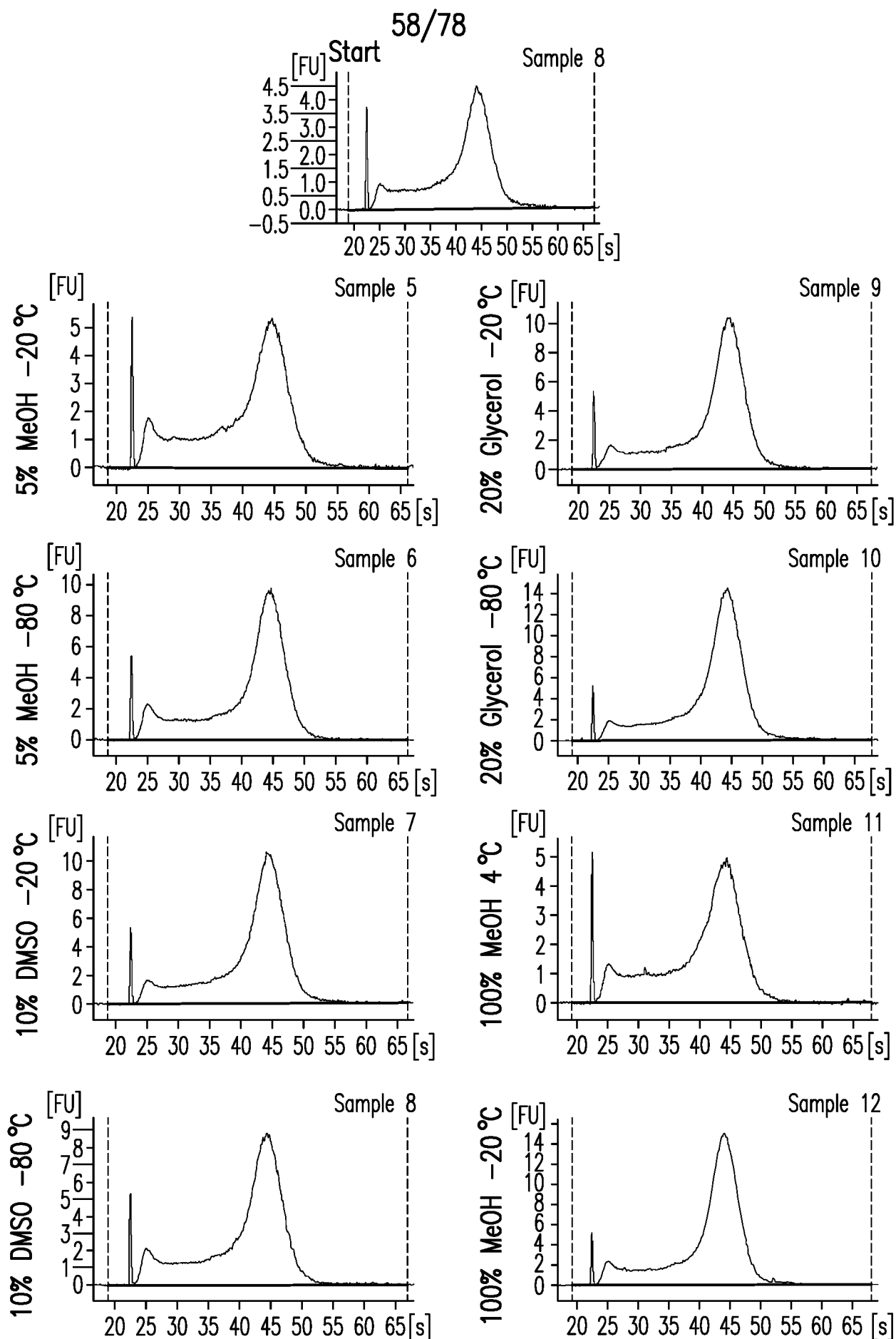
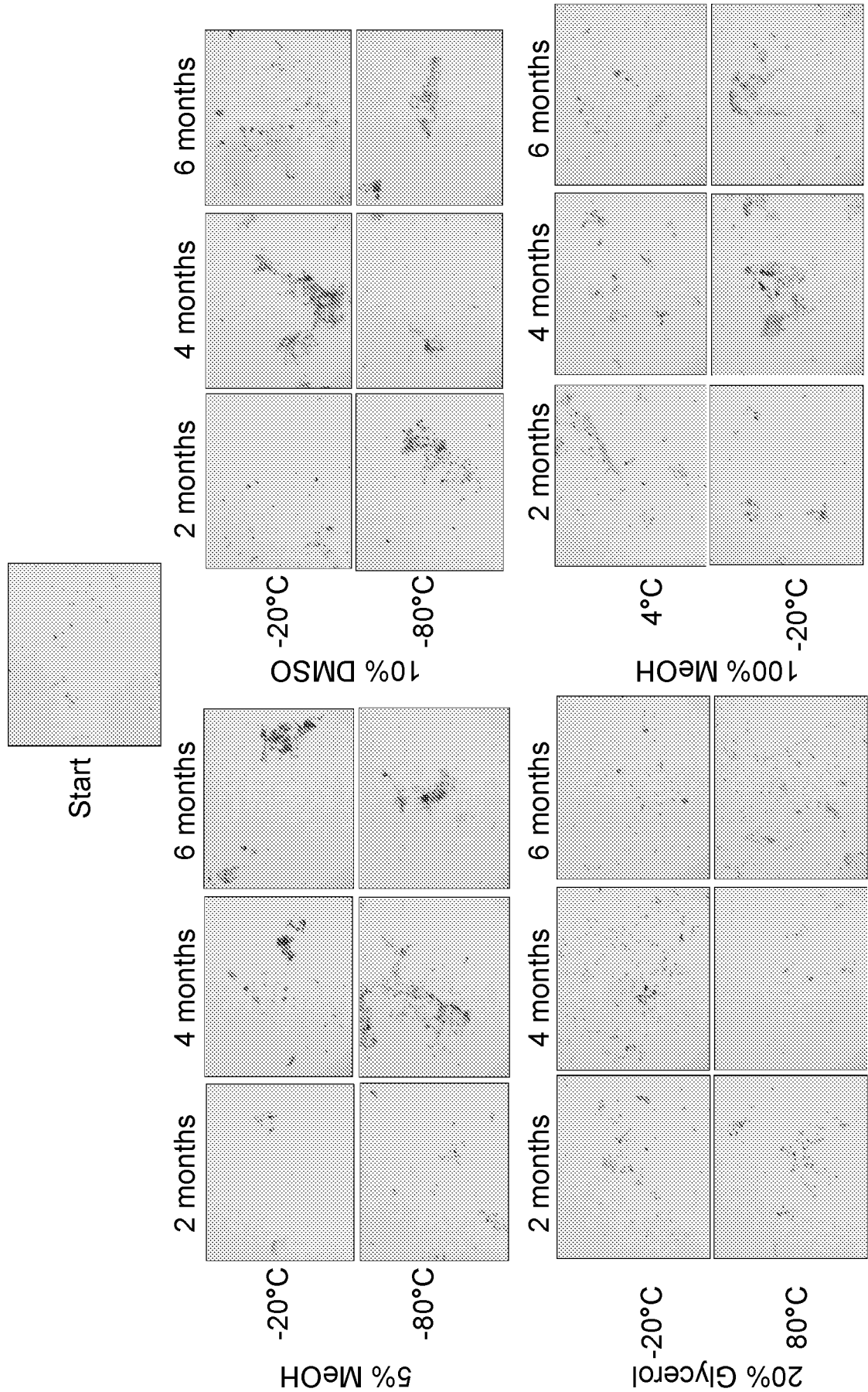


FIG.35B

**FIG.35C**



60/78

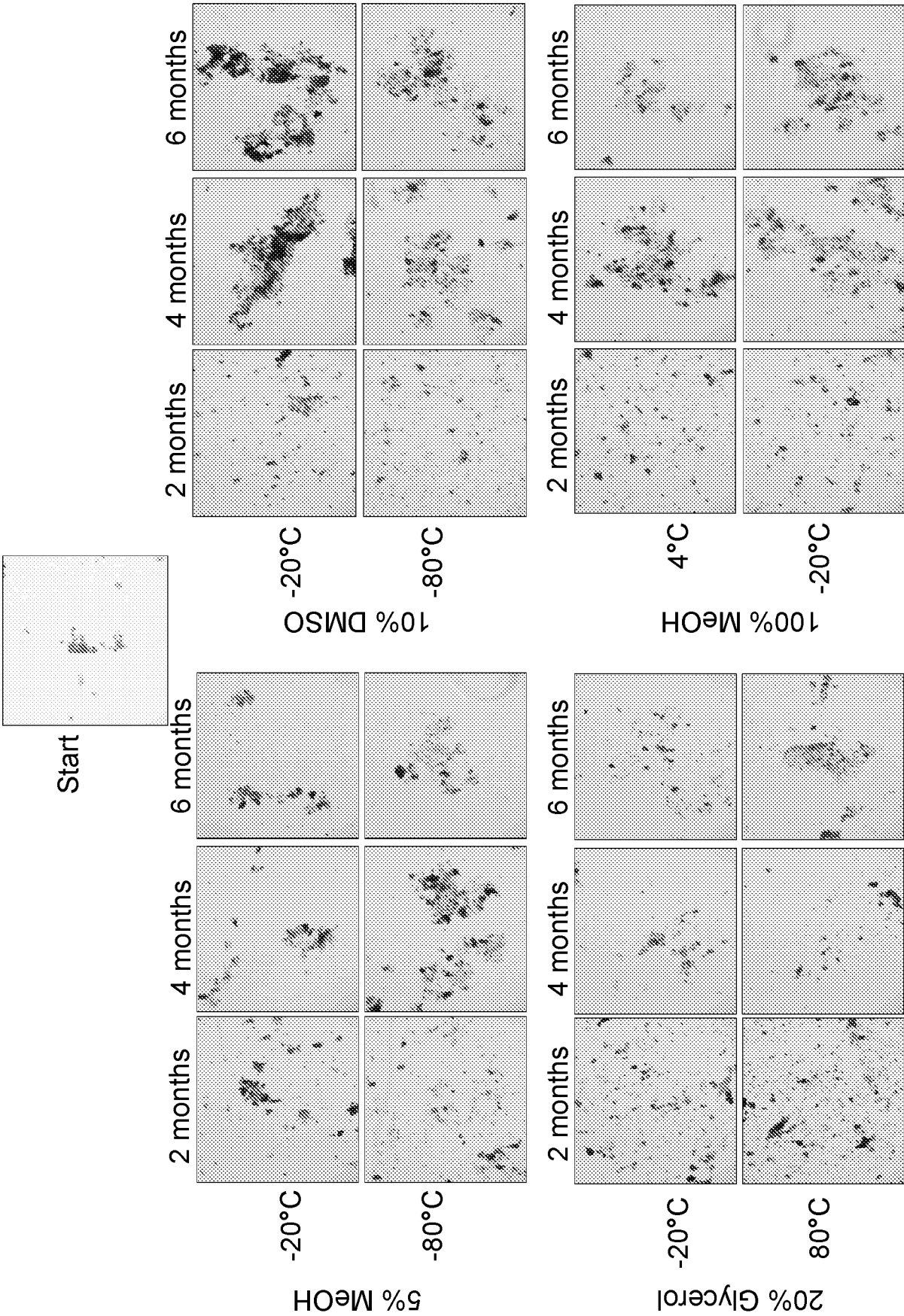


FIG. 36B

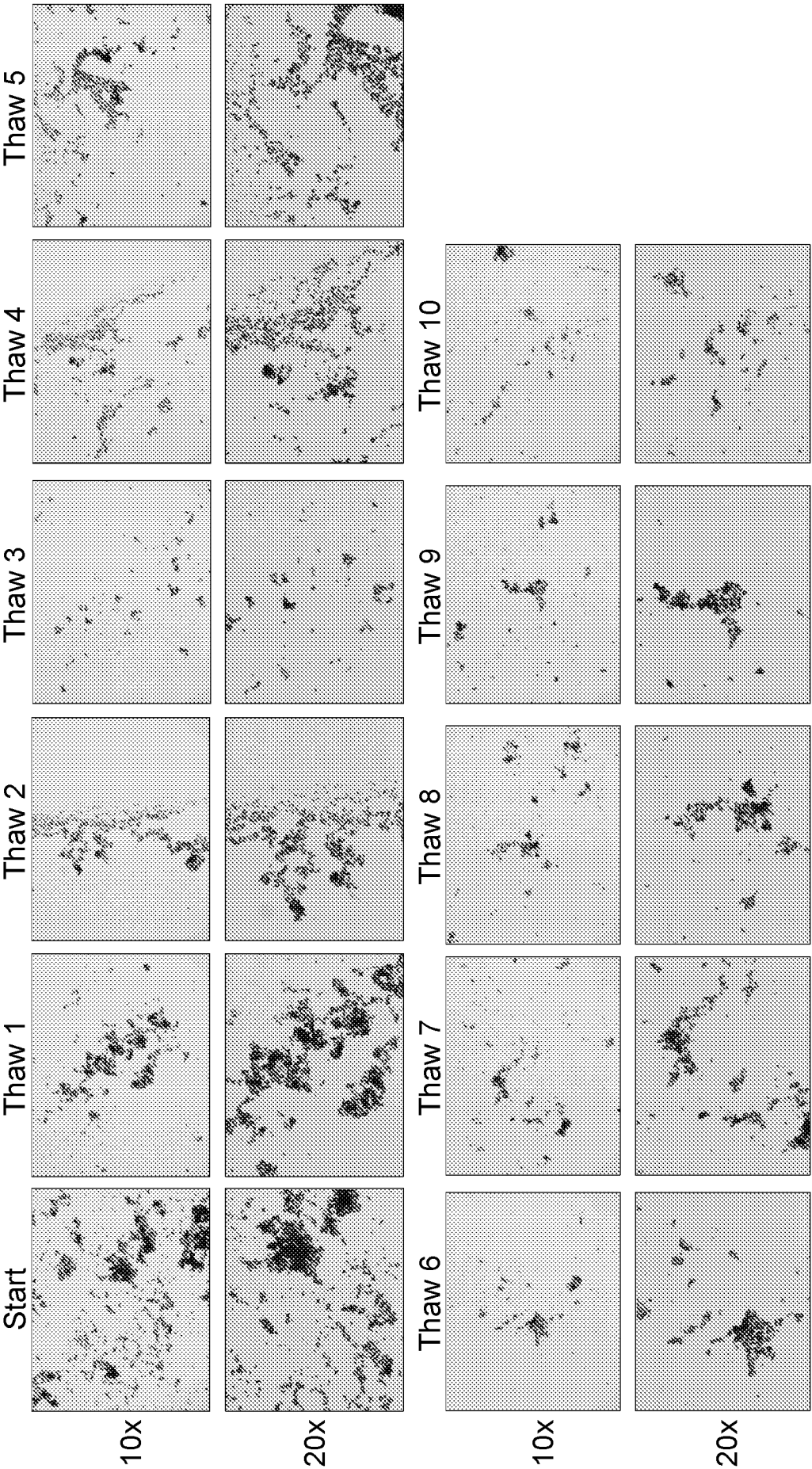


FIG.37A

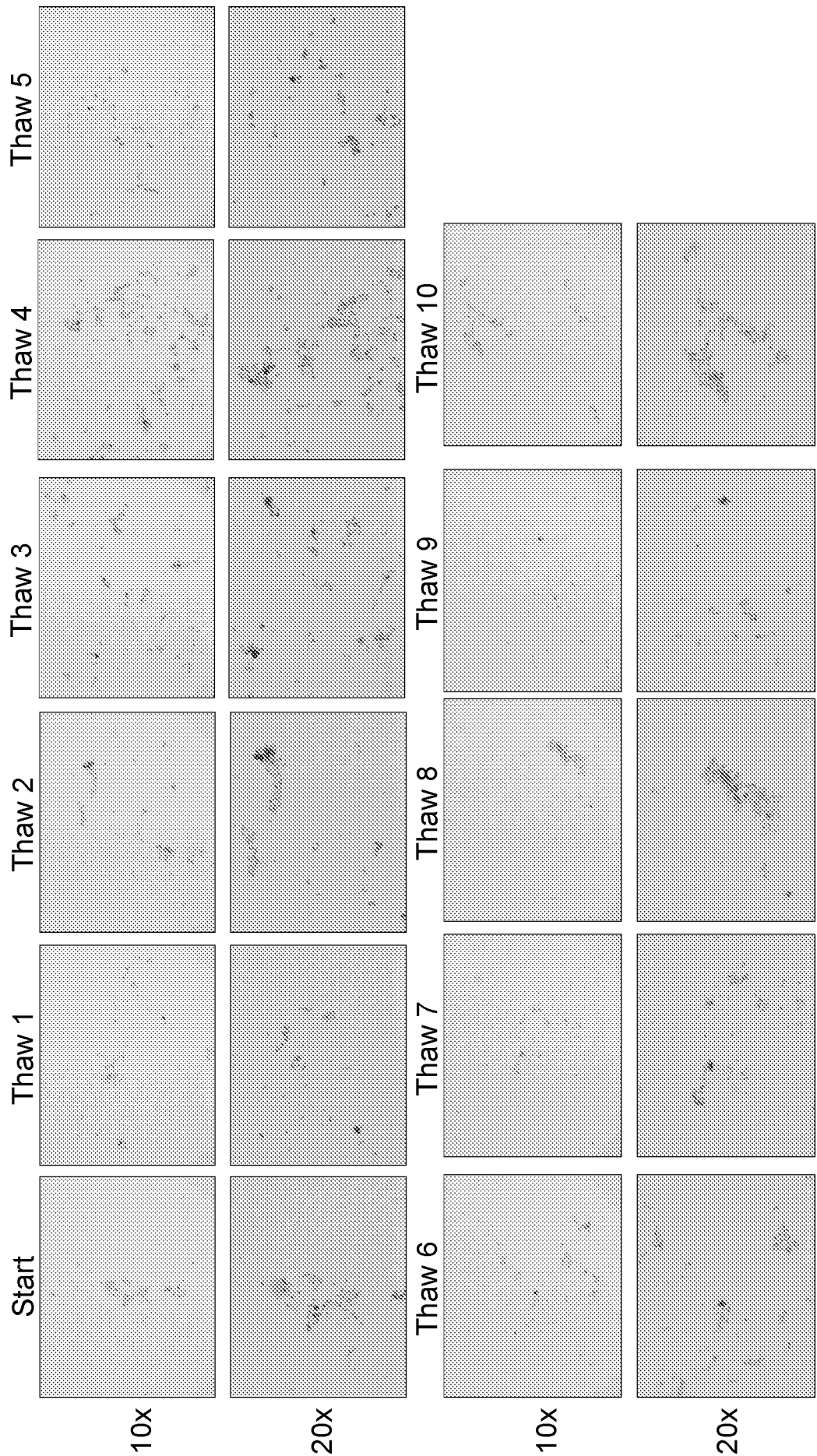


FIG.37B

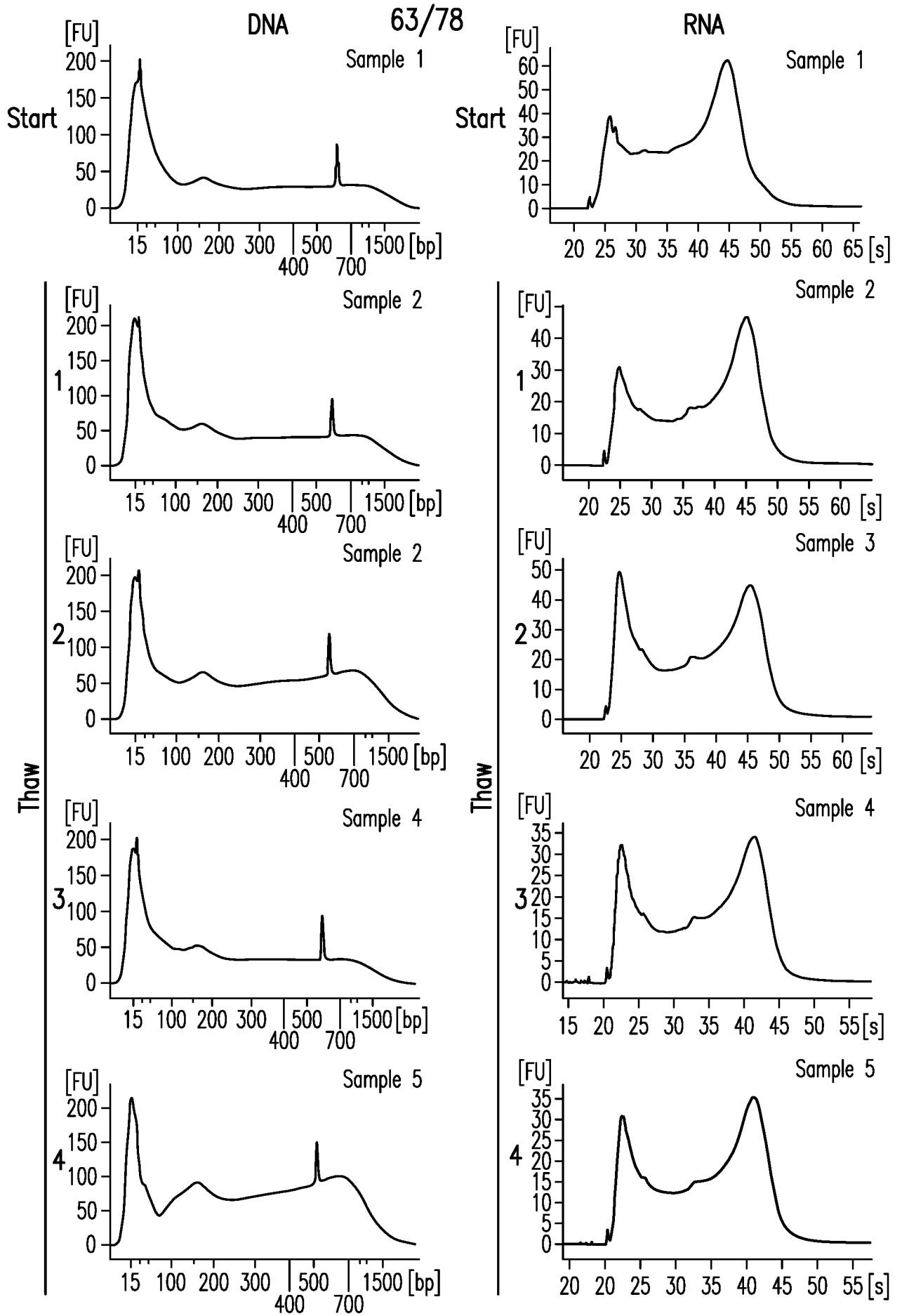


FIG.38

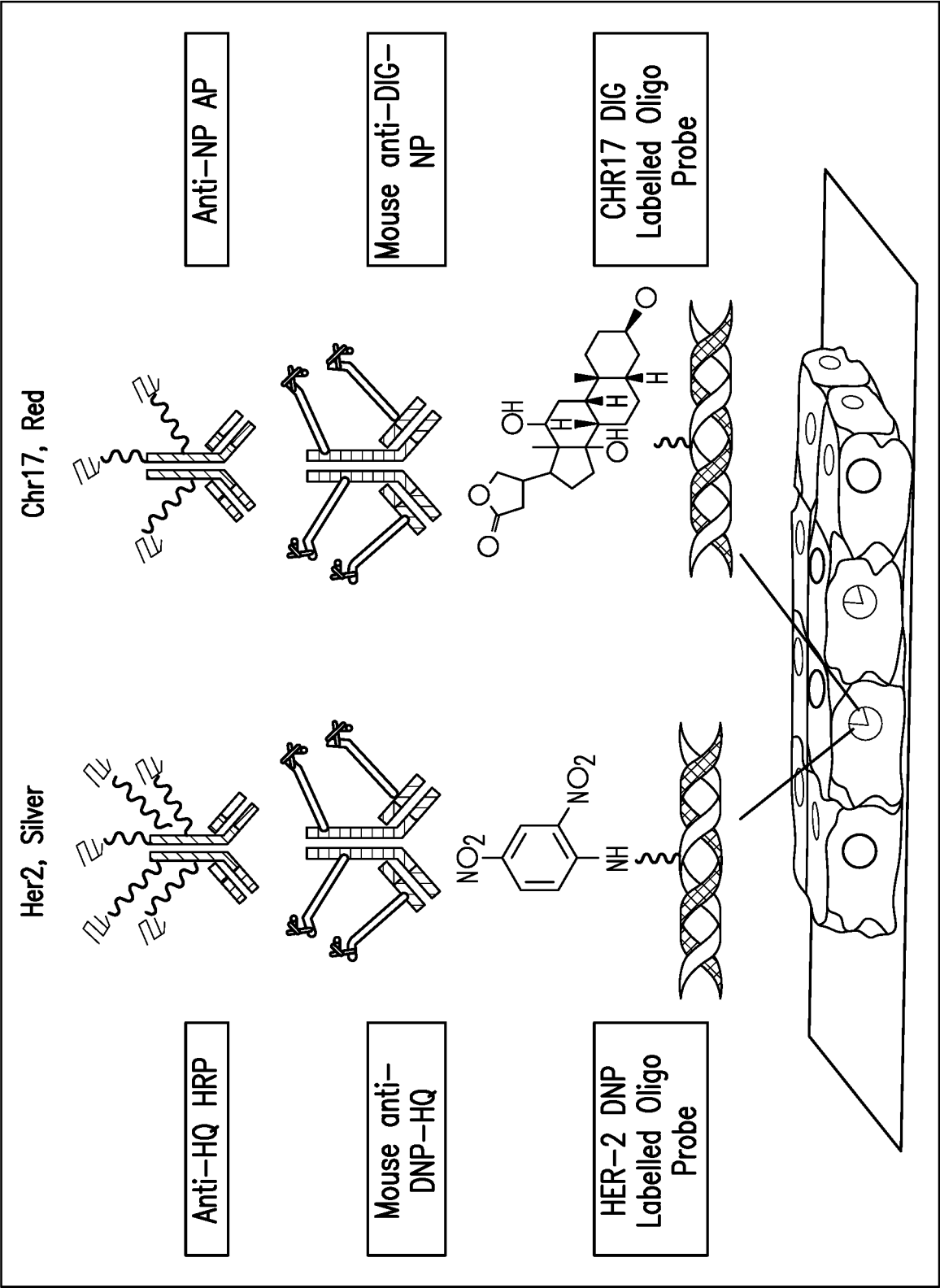


FIG.39

65/78

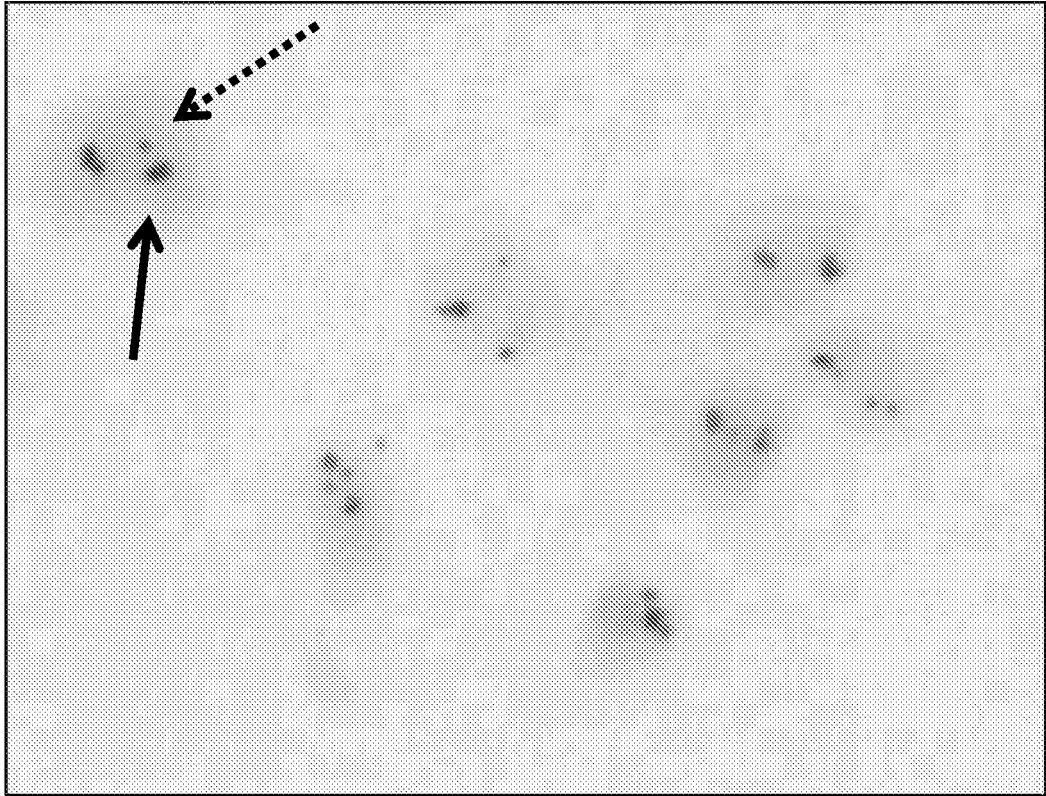


FIG.40

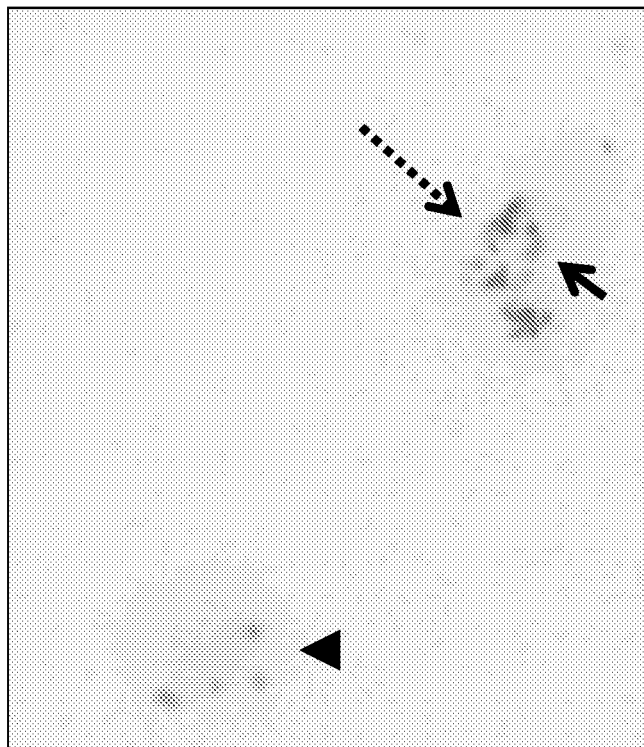
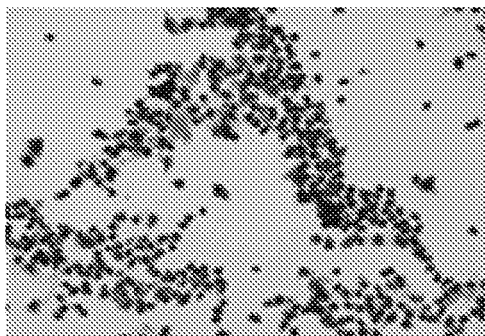


FIG.41

66/78

Pepsin, 5 mg/ml, 30 min



24 hours

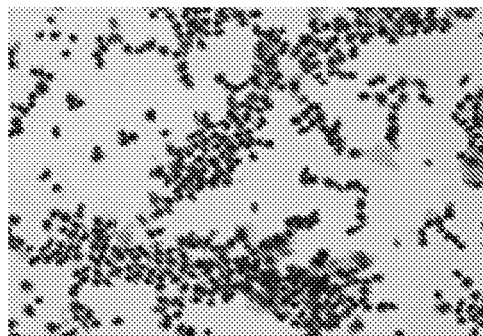
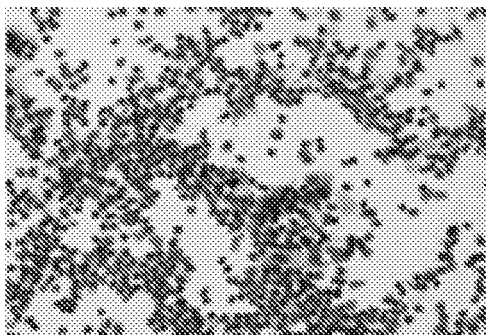


FIG.42A

Trypsin, 0.25%, 30 min



24 hours

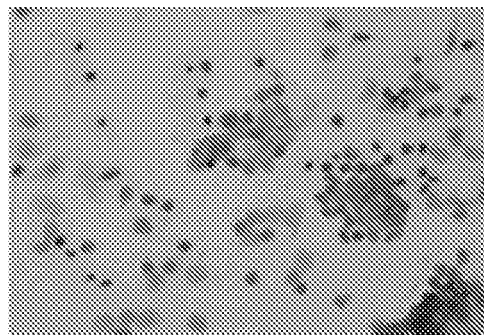


FIG.42B

67/78

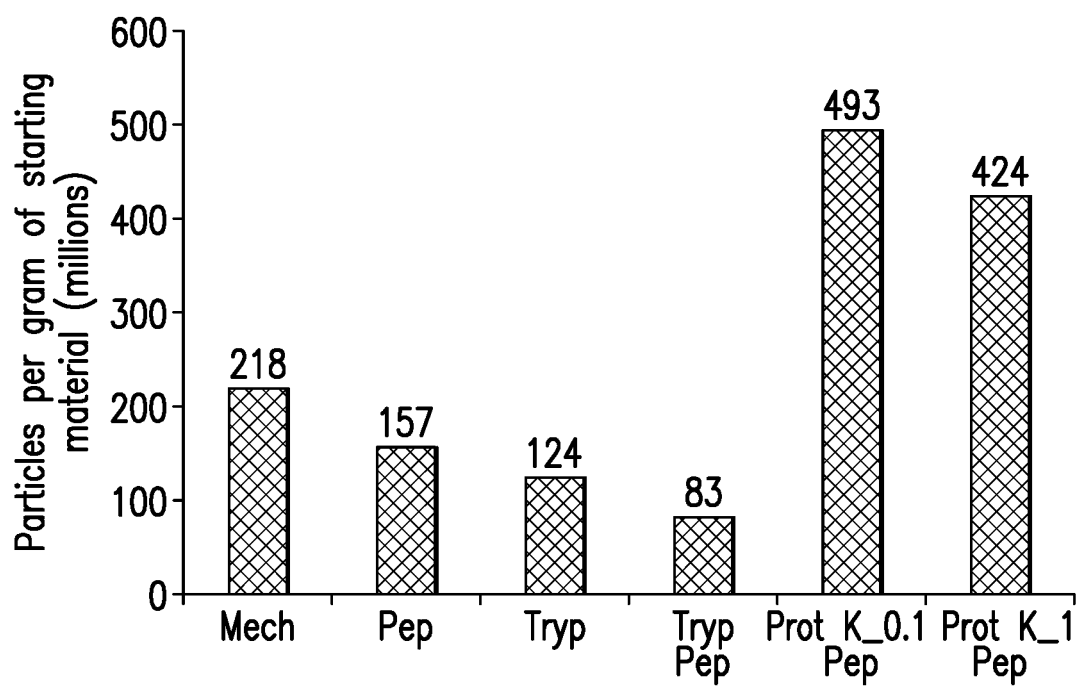


FIG.43

68/78

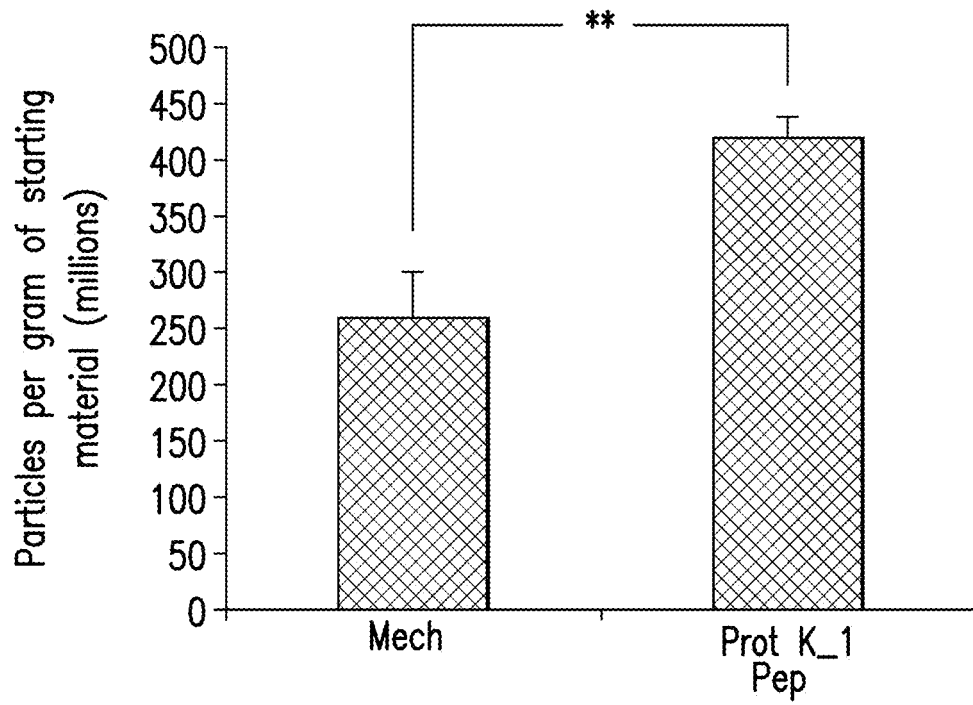


FIG.44A

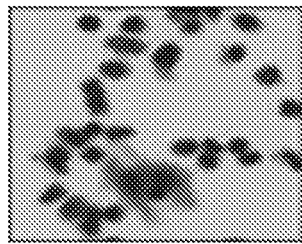


FIG.44B

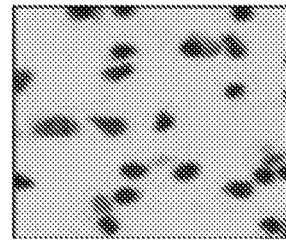


FIG.44C

69/78

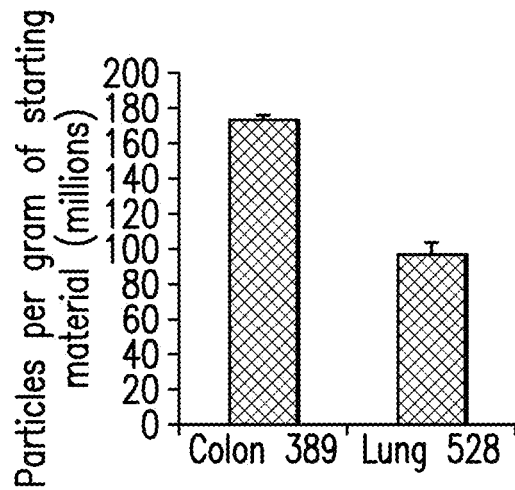


FIG.45A

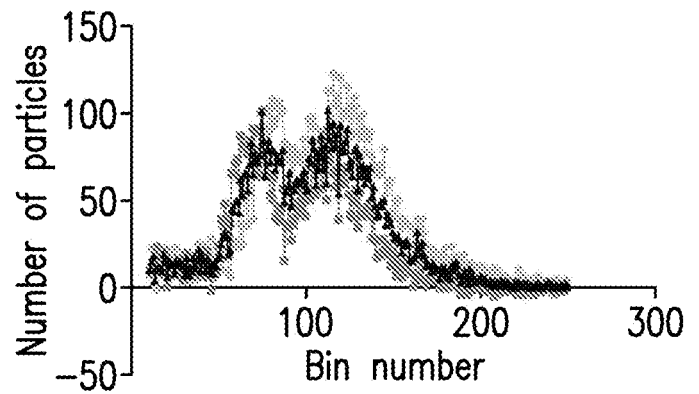


FIG.45B

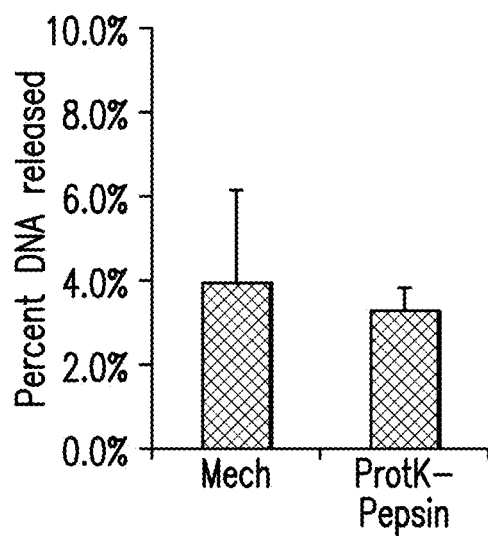


FIG.46A

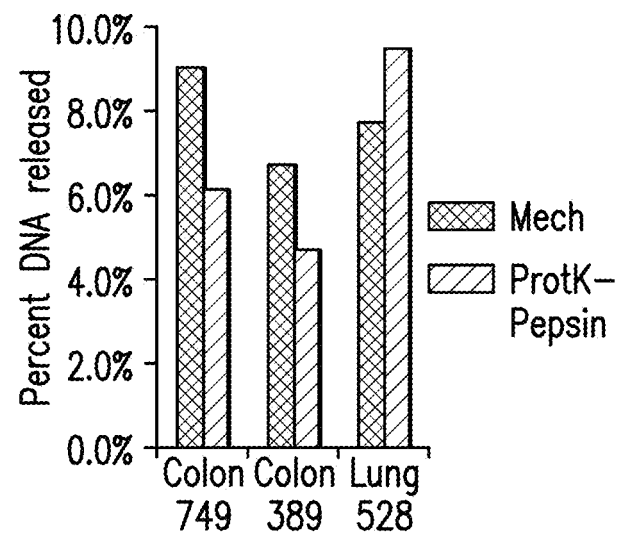


FIG.46B

70/78

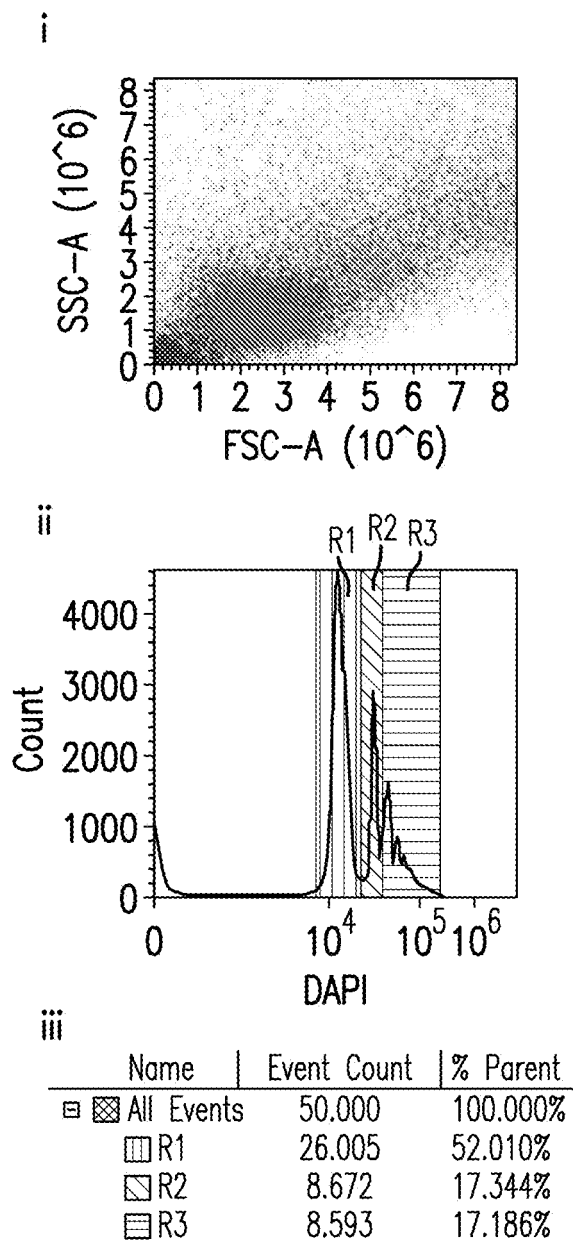


FIG.47A

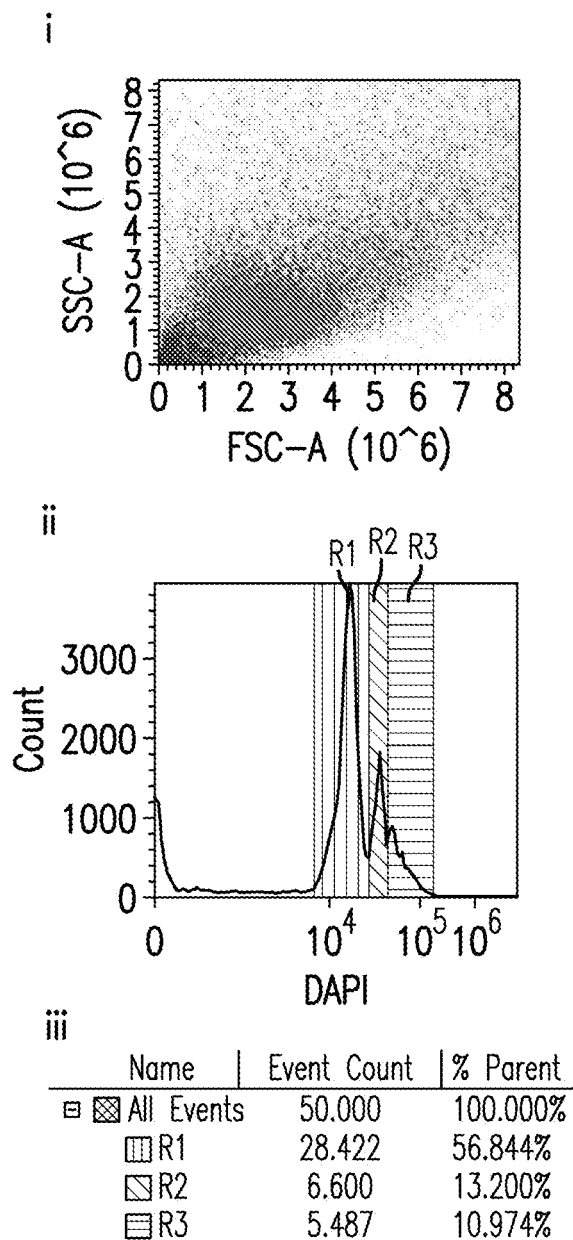


FIG.47B

71/78

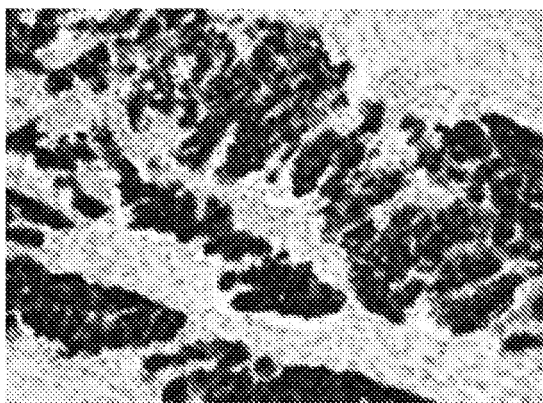


FIG. 48A

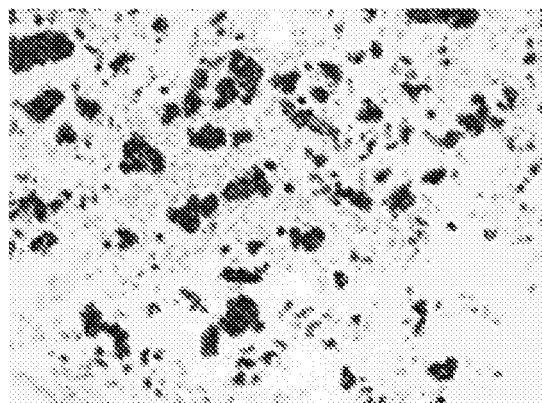


FIG. 48B

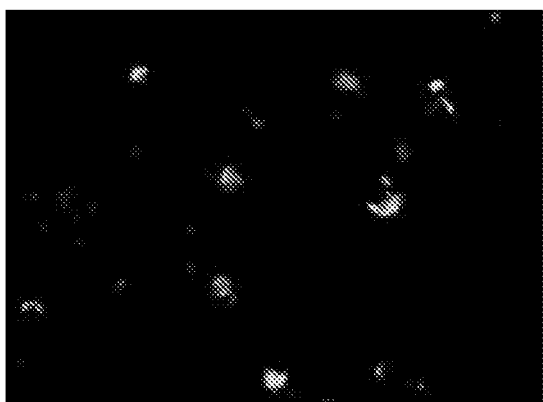


FIG. 48C



FIG. 48D

72/78

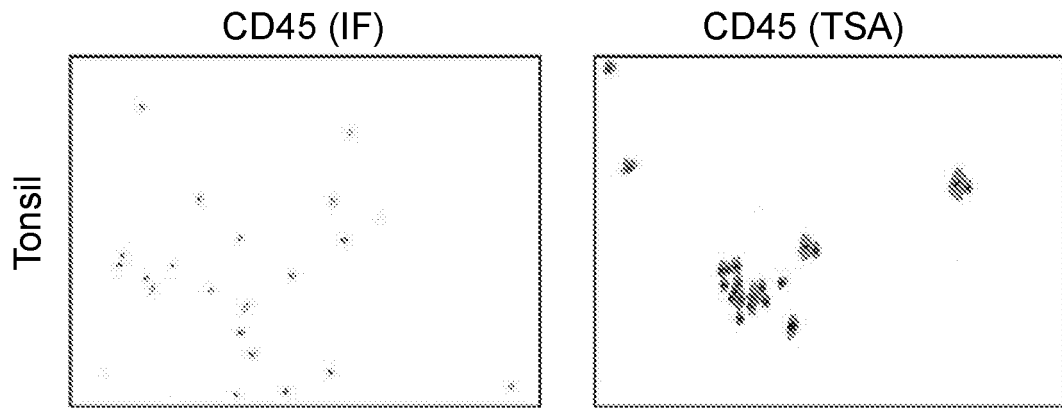


FIG.49A

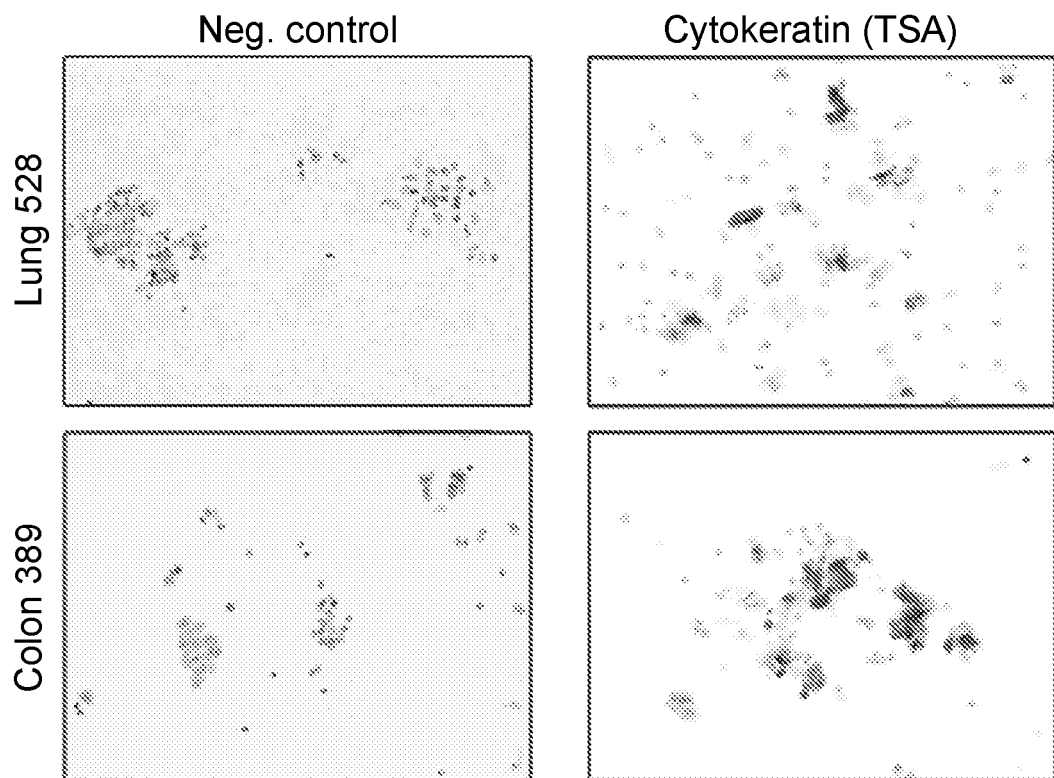
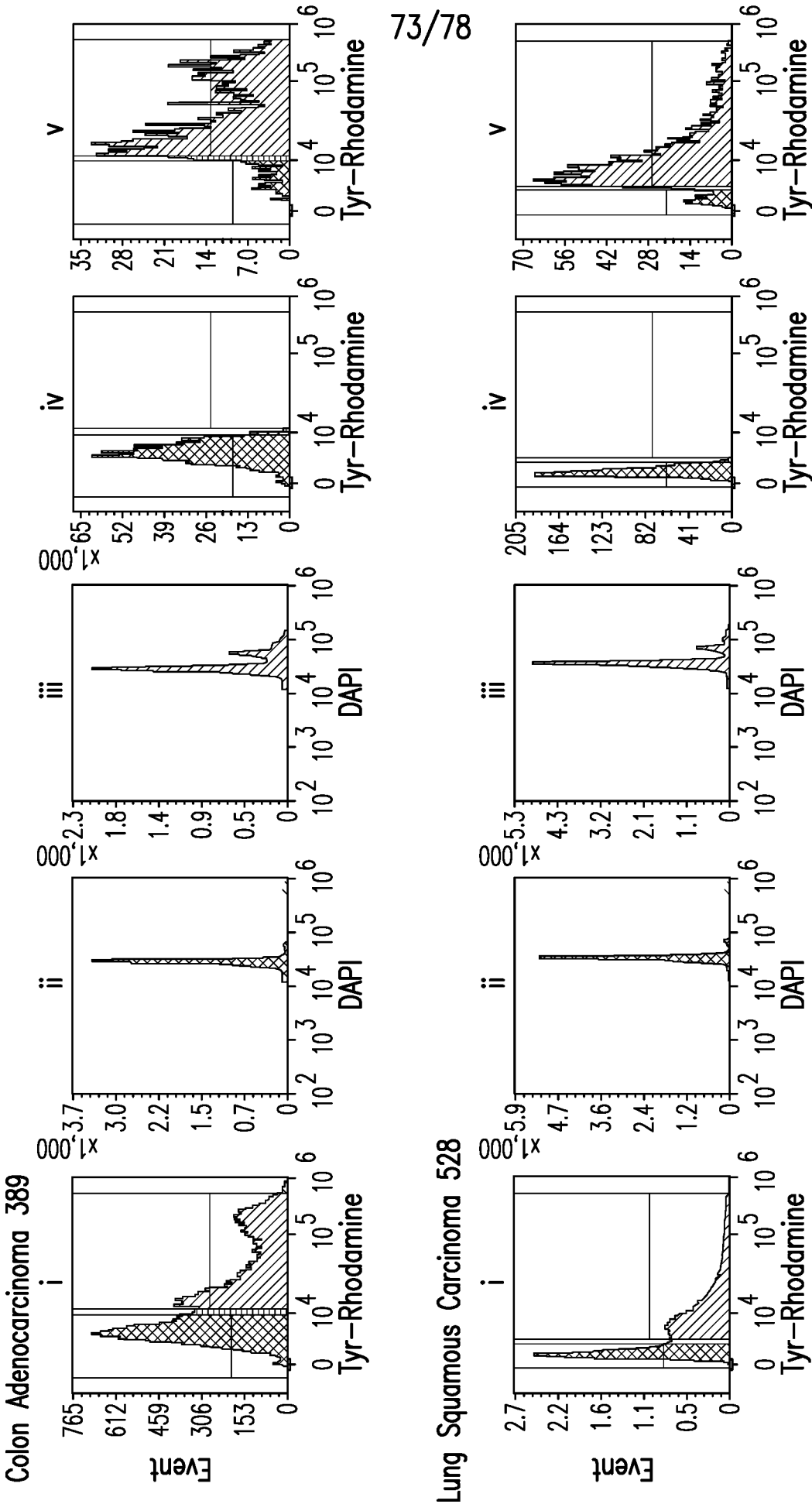
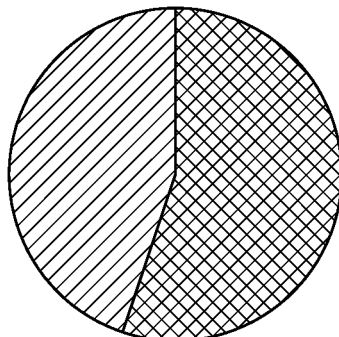


FIG.49B



74/78

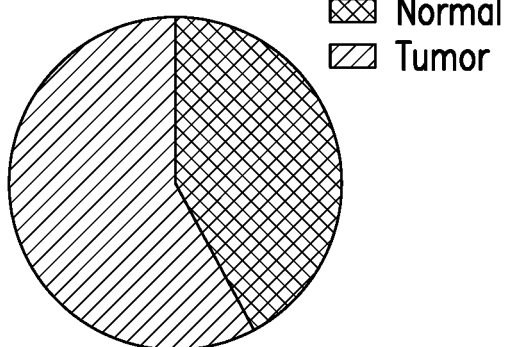
Colon 389



Total=100

FIG.51A

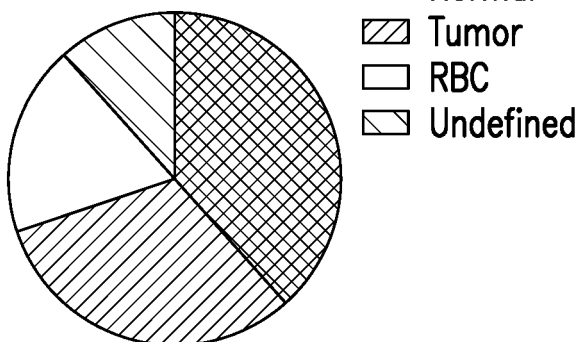
Lung 528



Total=100

FIG.51B

Colon 389



Total=100

FIG.51C

75/78

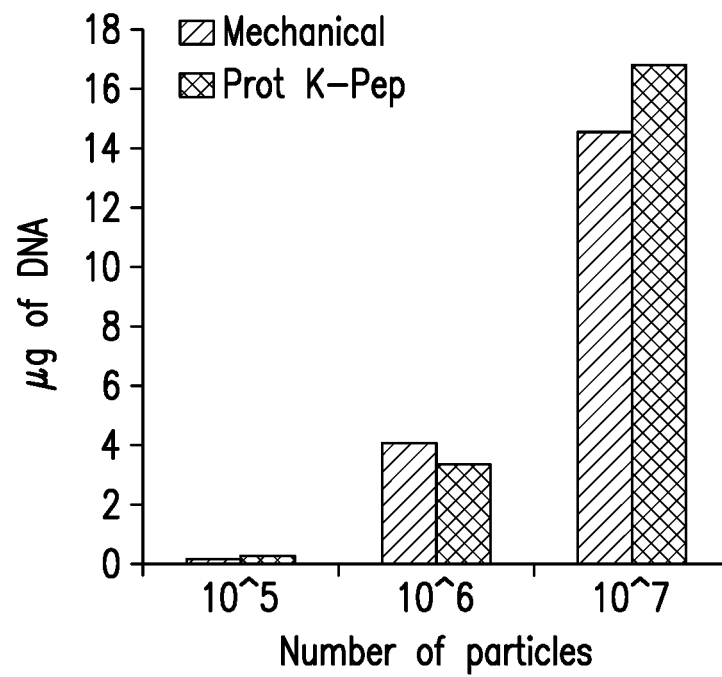


FIG.52

76/78

Whole
Tonsil

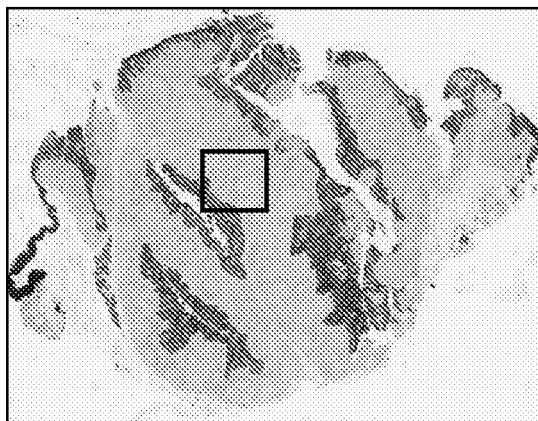


FIG.53A

Tonsil Representative
Sample

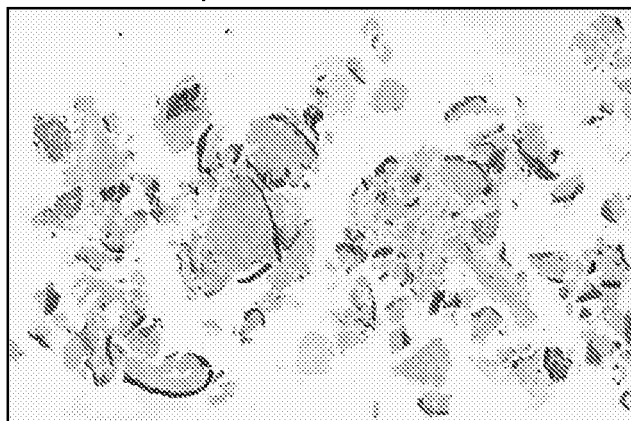


FIG.53B

77/78

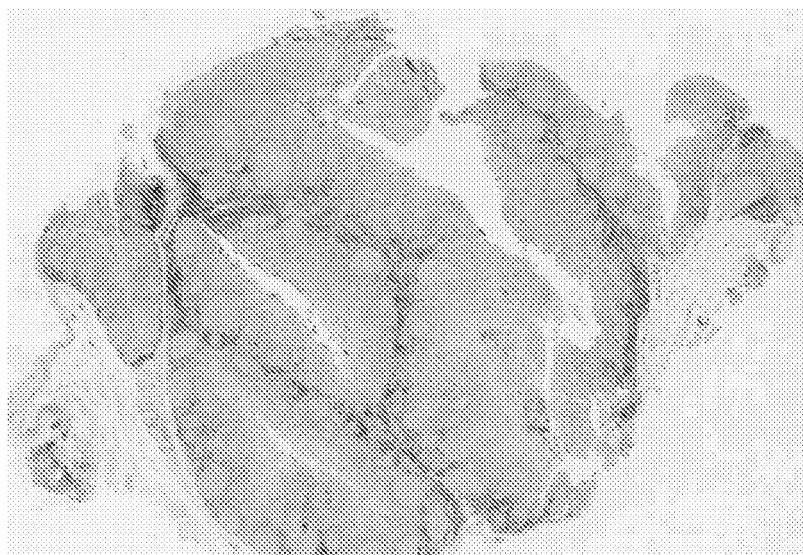


FIG.54A

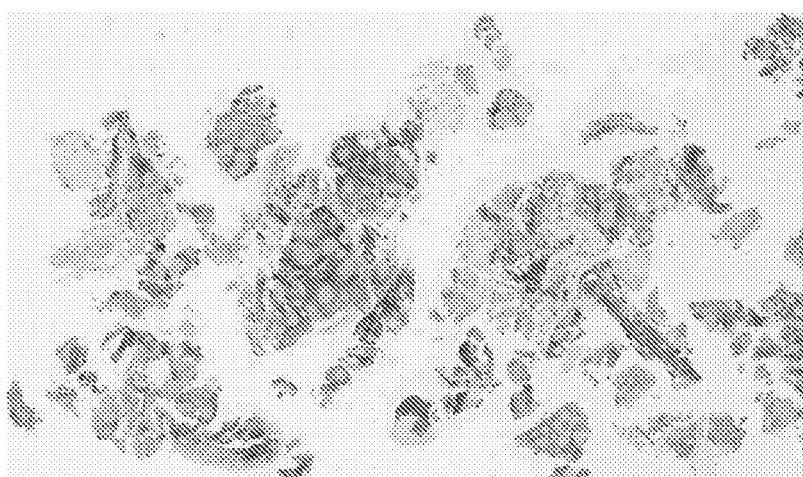


FIG.54B

78/78

Standard Pathology/Oncology Workflow

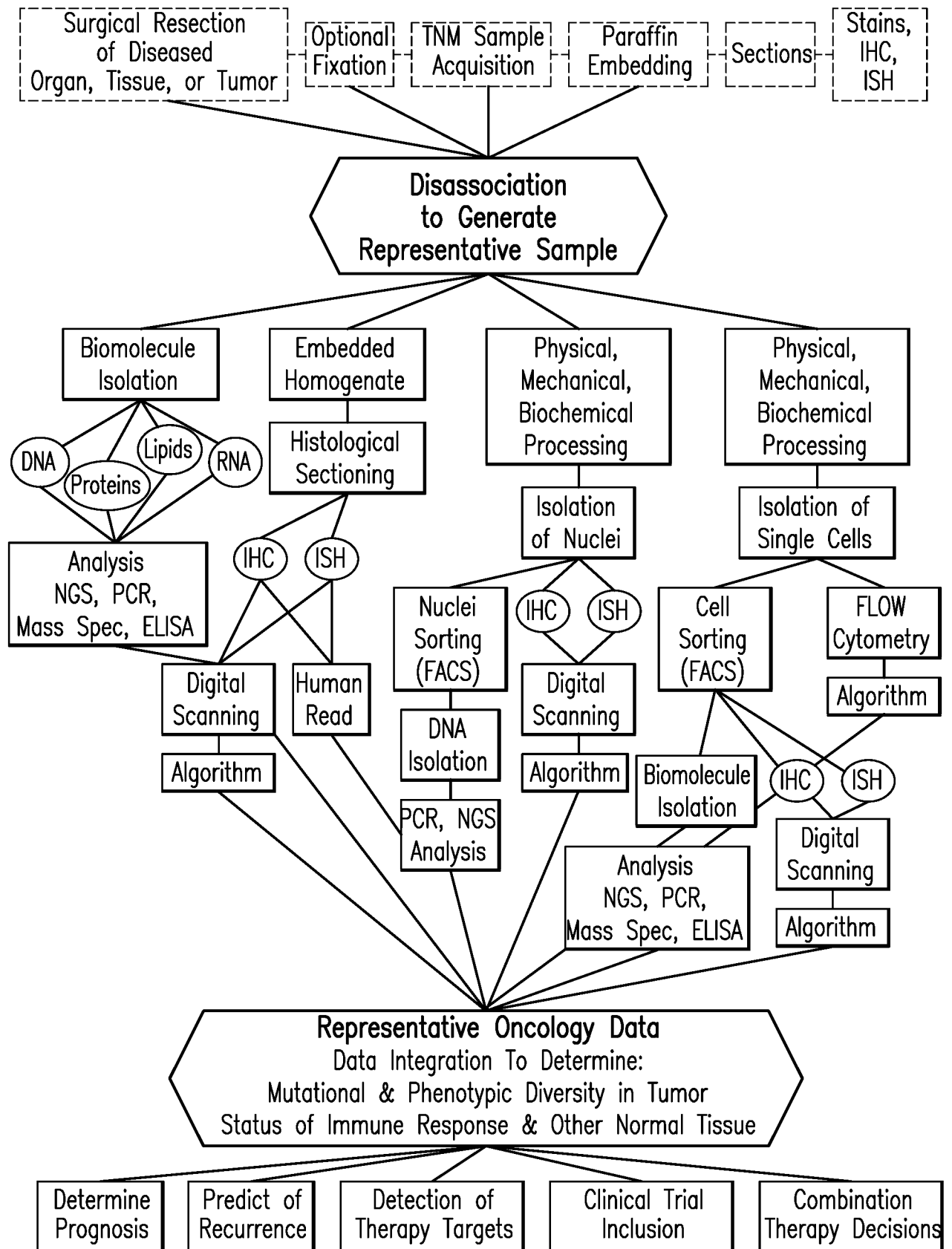


FIG.55