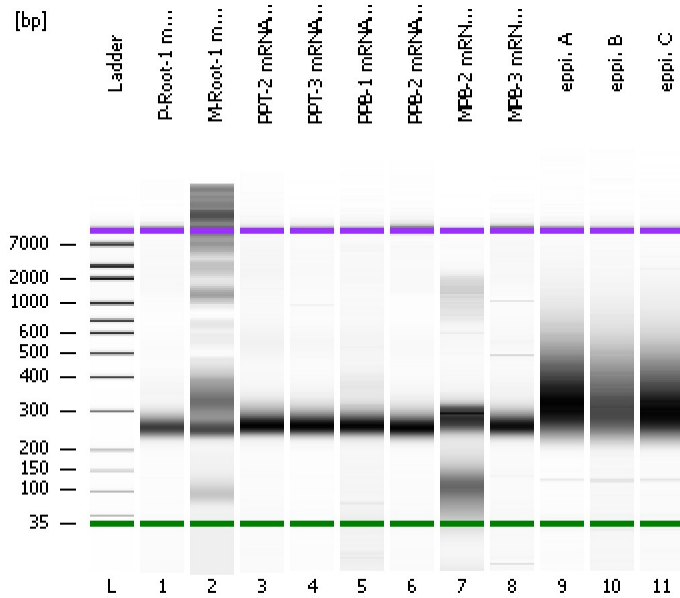


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
Modified: 6/25/2013 4:01:06 PM

Electrophoresis File Run Summary



Instrument Information:

Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

Assay Information:

Assay Origin Path: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\assays\dsDNA\High Sensitivity DNA.xsy
Assay Class: High Sensitivity DNA Assay
Version: 1.03
Assay Comments: Copyright © 2003-2010 Agilent Technologies

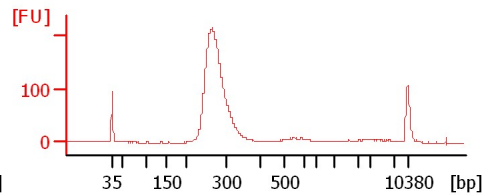
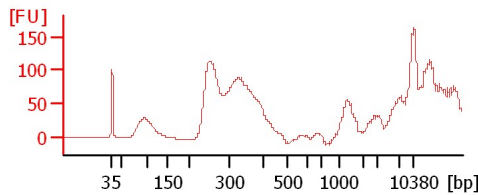
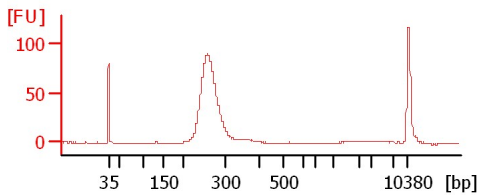
Chip Information:

Chip Lot #:
Reagent Kit Lot #:
Chip Comments:

P-Root-1 mRNA Lib

M-Root-1 mRNA Lib

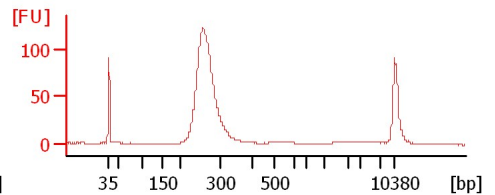
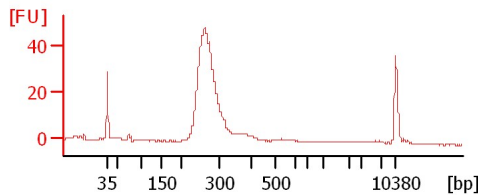
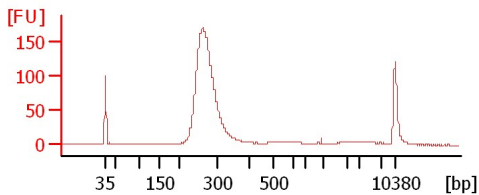
PPT-2 mRNA Lib



PPT-3 mRNA Lib

PPB-1 mRNA Lib

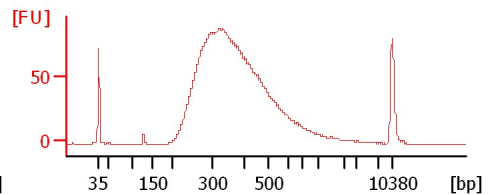
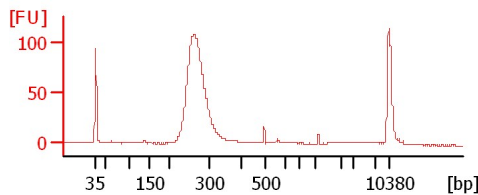
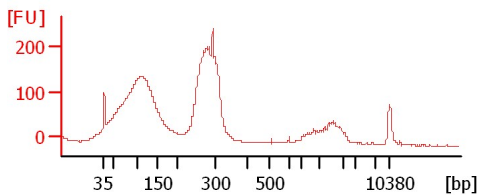
PPB-2 mRNA Lib



MPB-2 mRNA Lib

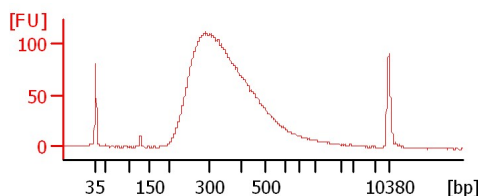
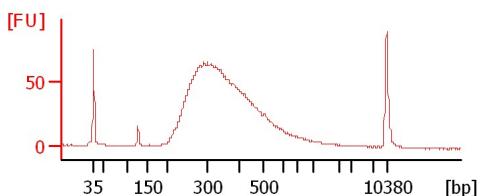
MPB-3 mRNA Lib

eppi. A



eppi. B

eppi. C



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
Modified: 6/25/2013 4:01:06 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
P-Root-1 mRNA Lib		<input type="checkbox"/>	✓			
M-Root-1 mRNA Lib		<input type="checkbox"/>	✓			
PPT-2 mRNA Lib		<input type="checkbox"/>	✓			
PPT-3 mRNA Lib		<input type="checkbox"/>	✓			
PPB-1 mRNA Lib		<input type="checkbox"/>	✓			
PPB-2 mRNA Lib		<input type="checkbox"/>	✓			
MPB-2 mRNA Lib		<input type="checkbox"/>	✓			
MPB-3 mRNA Lib		<input type="checkbox"/>	✓			
eppi. A		<input type="checkbox"/>	✓			
eppi. B		<input type="checkbox"/>	✓			
eppi. C		<input type="checkbox"/>	✓			
Ladder		<input type="checkbox"/>	✓			

Chip Lot #

Reagent Kit Lot #

Chip Comments :

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
Modified: 6/25/2013 4:01:06 PM

Electrophoresis Assay Details

General Analysis Settings

Number of Available Sample and Ladder Wells (Max.) : 12
Minimum Visible Range [s] : 32
Maximum Visible Range [s] : 138
Start Analysis Time Range [s] : 33
End Analysis Time Range [s] : 137.5
Ladder Concentration [pg/μl] : 1950
Uses Standard Area for Ladder Fragments
Lower Marker Concentration [pg/μl] : 125
Upper Marker Concentration [pg/μl] : 75
Used Upper Marker for Quantitation
Standard Curve Fit is Point to Point
Show Data Aligned to Lower and Upper Marker

Integrator Settings

Integration Start Time [s] : 33.05
Integration End Time [s] : 137
Slope Threshold : 0.8
Height Threshold [FU] : 5
Area Threshold : 0.1
Width Threshold [s] : 0.6
Baseline Plateau [s] : 0.5

Filter Settings

Filter Width [s] : 0.5
Polynomial Order : 4

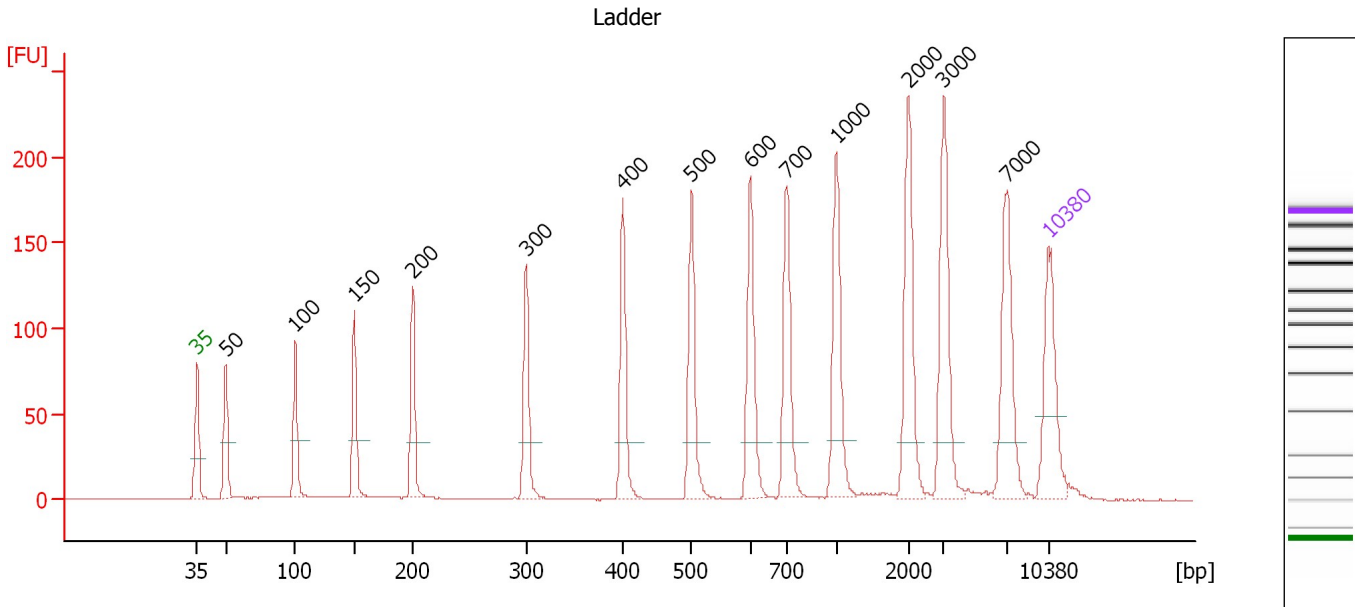
Ladder

Ladder Peak	Size	Area
1	35	160
2	50	210
3	100	208
4	150	221
5	200	242
6	300	270
7	400	305
8	500	306
9	600	336
10	700	321
11	1000	366
12	2000	413
13	3000	411
14	7000	400
15	10380	214

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
 Modified: 6/25/2013 4:01:06 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.1

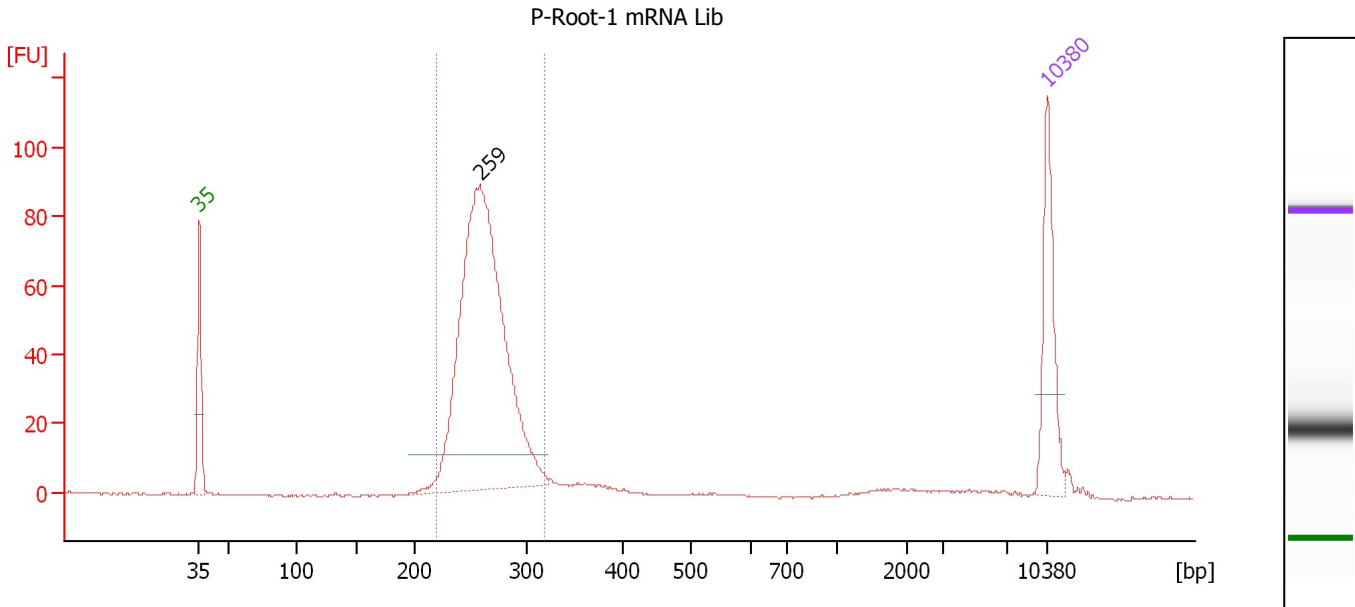
Peak table for Ladder

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	150.00	4,545.5	Ladder Peak
3	100	150.00	2,272.7	Ladder Peak
4	150	150.00	1,515.2	Ladder Peak
5	200	150.00	1,136.4	Ladder Peak
6	300	150.00	757.6	Ladder Peak
7	400	150.00	568.2	Ladder Peak
8	500	150.00	454.5	Ladder Peak
9	600	150.00	378.8	Ladder Peak
10	700	150.00	324.7	Ladder Peak
11	1,000	150.00	227.3	Ladder Peak
12	2,000	150.00	113.6	Ladder Peak
13	3,000	150.00	75.8	Ladder Peak
14	7,000	150.00	32.5	Ladder Peak
15	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
 Modified: 6/25/2013 4:01:06 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 1 : P-Root-1 mRNA Lib

Height Threshold [FU] : 10

Overall Results for sample 1 : P-Root-1 mRNA Lib

Number of peaks found: 1 Corr. Area 1: 610.6
 Noise: 0.2

Peak table for sample 1 : P-Root-1 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	259	712.98	4,176.1	
3	10,380	75.00	10.9	Upper Marker

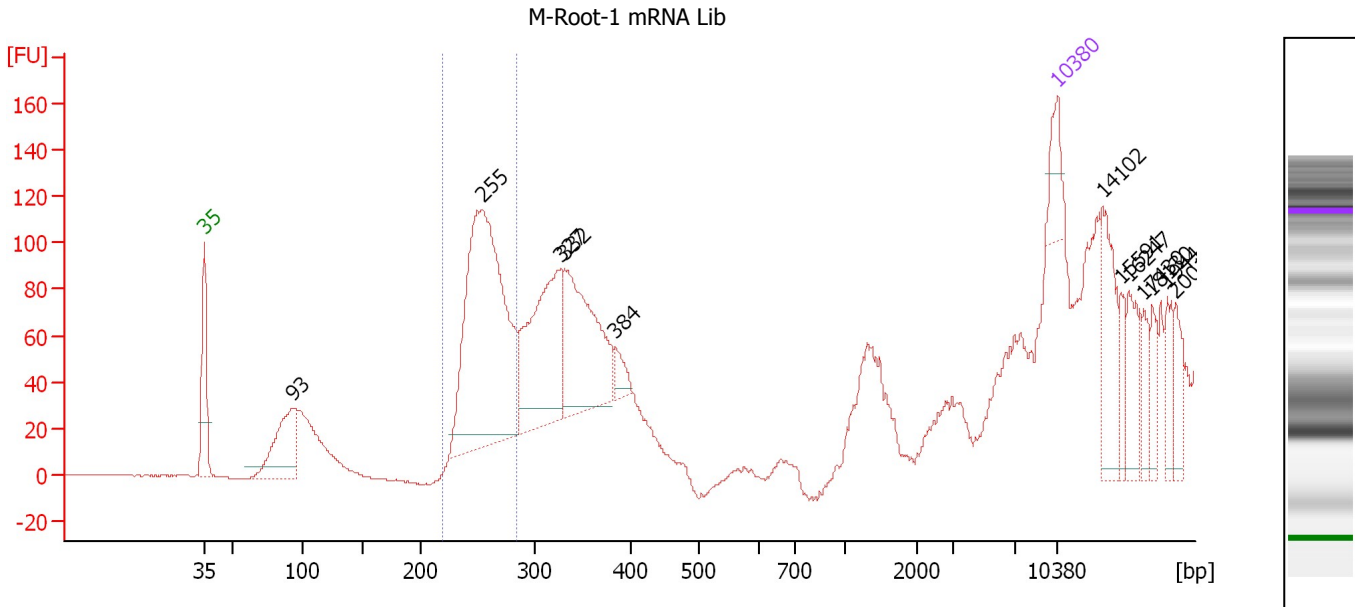
Region table for sample 1 : P-Root-1 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
221	317	263	4,190.3	725.38	610.6	89	7.2	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
 Modified: 6/25/2013 4:01:06 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : M-Root-1 mRNA Lib

Number of peaks found: 12 Corr. Area 1: 560.7
 Noise: 0.2

Peak table for sample 2 : M-Root-1 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	93	351.30	5,752.2	
3	255	1,304.25	7,756.0	
4	327	562.07	2,606.7	
5	332	530.25	2,418.3	
6	384	53.28	210.2	
7	10,380	75.00	10.9	Upper Marker
8	14,102	0.00	0.0	
9	15,591	0.00	0.0	
10	16,247	0.00	0.0	
11	17,430	0.00	0.0	
12	18,130	0.00	0.0	
13	19,444	0.00	0.0	
14	20,013	0.00	0.0	

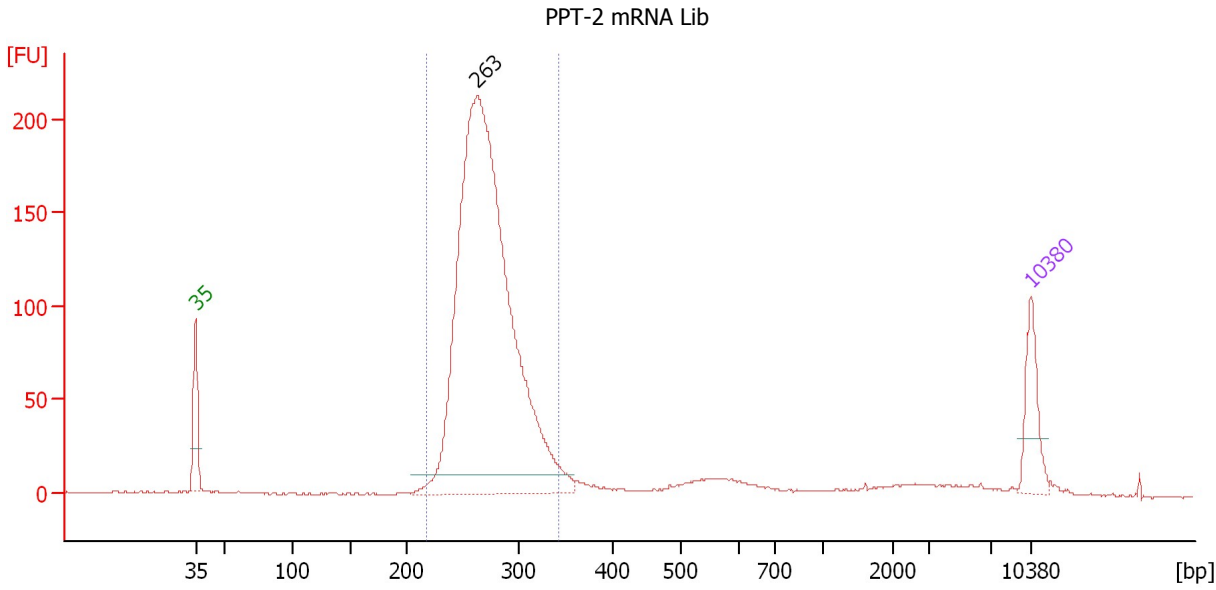
Region table for sample 2 : M-Root-1 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
219	285	258	7,081.8	1,205.97	560.7	31	5.2	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
 Modified: 6/25/2013 4:01:06 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 3 : PPT-2 mRNA Lib

Height Threshold [FU] : 10

Overall Results for sample 3 : PPT-2 mRNA Lib

Number of peaks found: 1 Corr. Area 1: 1,651.2
 Noise: 0.3

Peak table for sample 3 : PPT-2 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	263	1,899.78	10,933.0	
3	10,380	75.00	10.9	Upper Marker

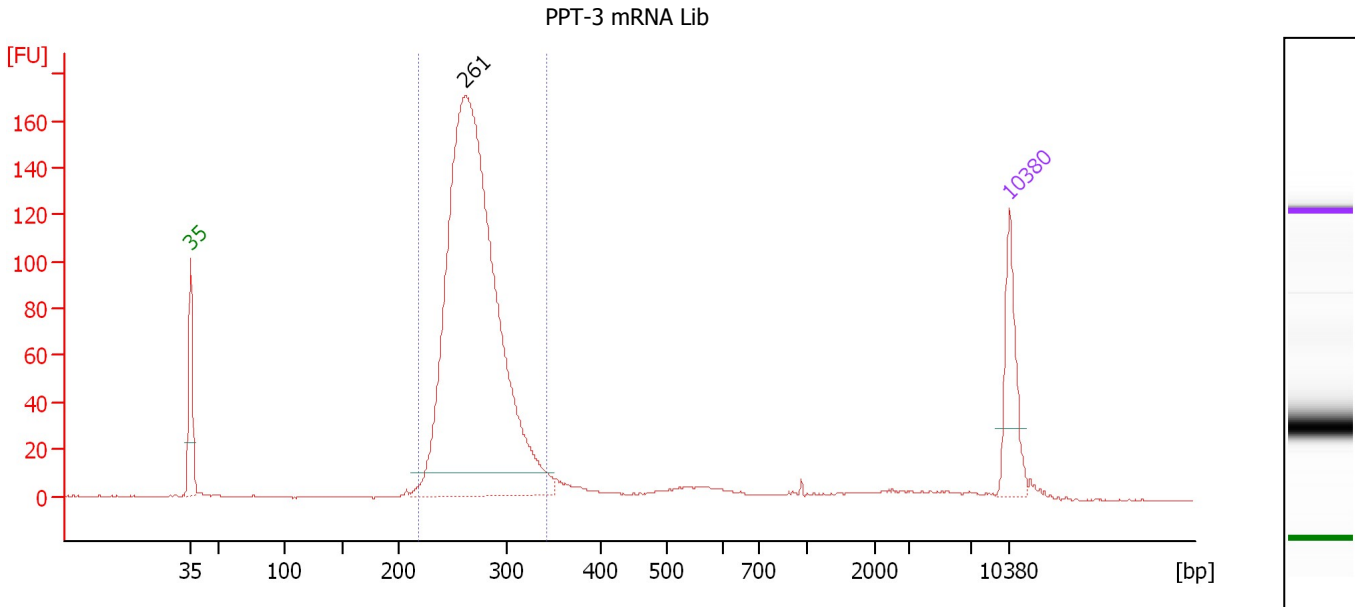
Region table for sample 3 : PPT-2 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
218	342	272	10,276.6	1,837.73	1,651.2	87	8.5	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
 Modified: 6/25/2013 4:01:06 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 4 : PPT-3 mRNA Lib

Height Threshold [FU] : 10

Overall Results for sample 4 : PPT-3 mRNA Lib

Number of peaks found: 1 Corr. Area 1: 1,310.8
 Noise: 0.2

Peak table for sample 4 : PPT-3 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	261	1,405.90	8,159.3	
3	10,380	75.00	10.9	Upper Marker

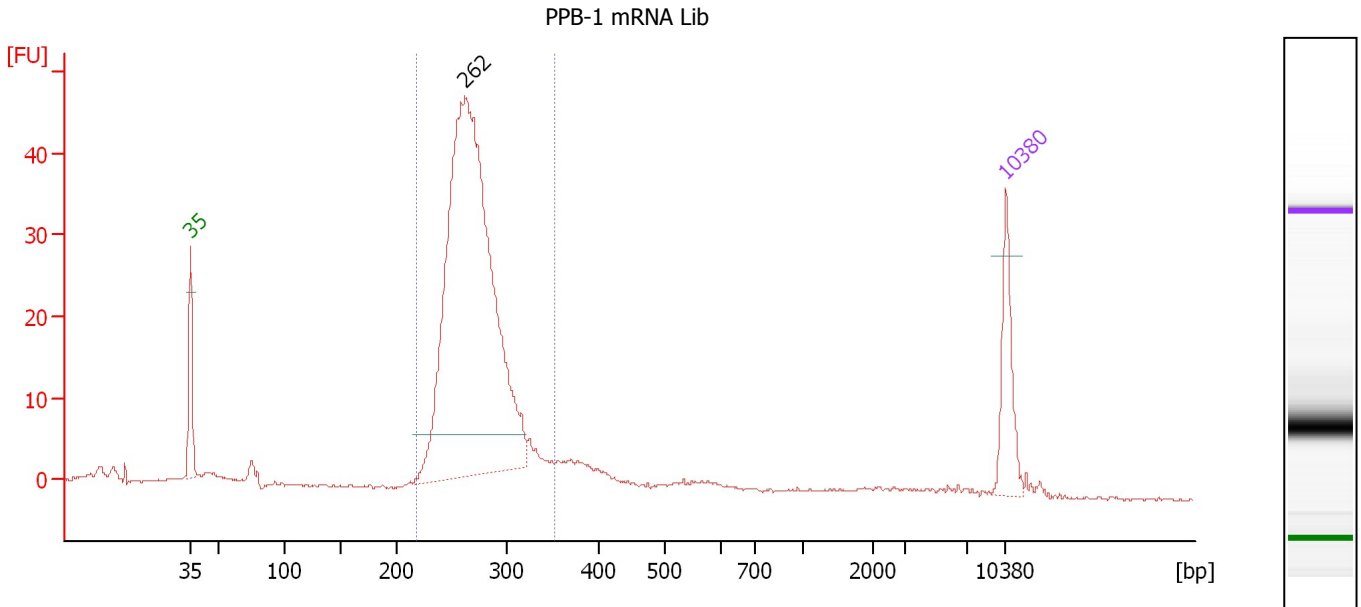
Region table for sample 4 : PPT-3 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
219	342	270	7,710.3	1,370.18	1,310.8	89	8.4	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
 Modified: 6/25/2013 4:01:06 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : PPB-1 mRNA Lib

Number of peaks found: 1 Corr. Area 1: 359.3
 Noise: 0.2

Peak table for sample 5 : PPB-1 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	262	1,302.55	7,526.4	
3	10,380	75.00	10.9	Upper Marker

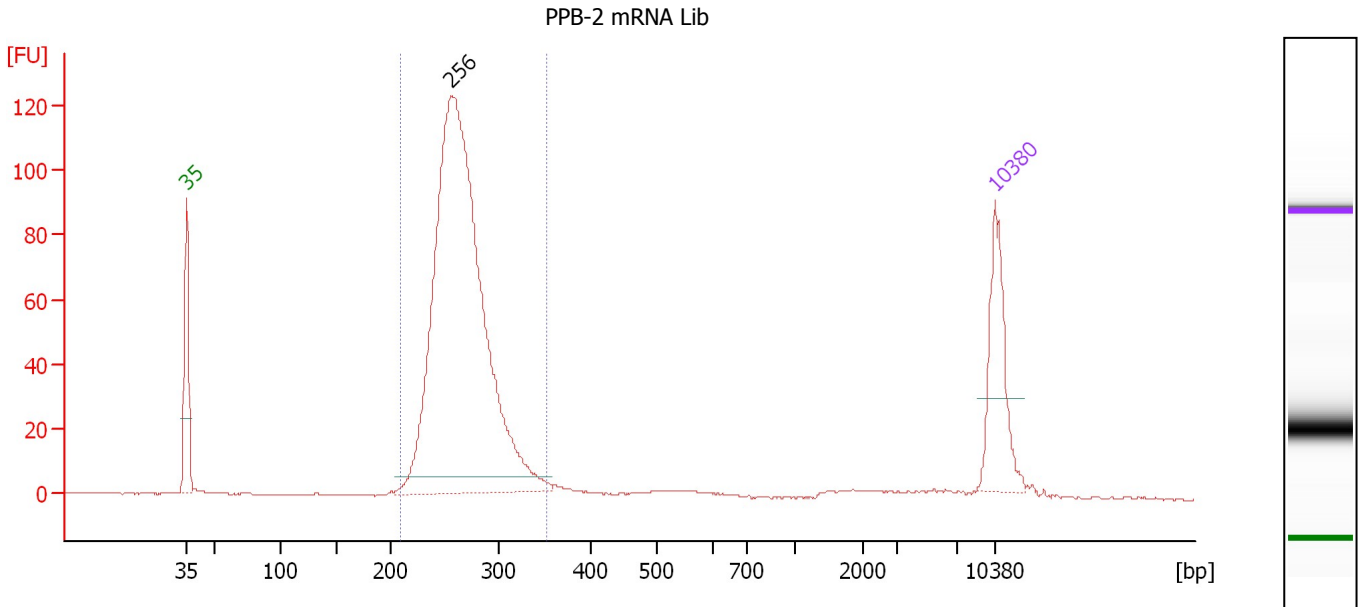
Region table for sample 5 : PPB-1 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
217	353	272	7,835.3	1,397.02	359.3	88	8.8	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
 Modified: 6/25/2013 4:01:06 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : PPB-2 mRNA Lib

Number of peaks found: 1 Corr. Area 1: 945.2
 Noise: 0.2

Peak table for sample 6 : PPB-2 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	256	943.24	5,586.7	
3	10,380	75.00	10.9	Upper Marker

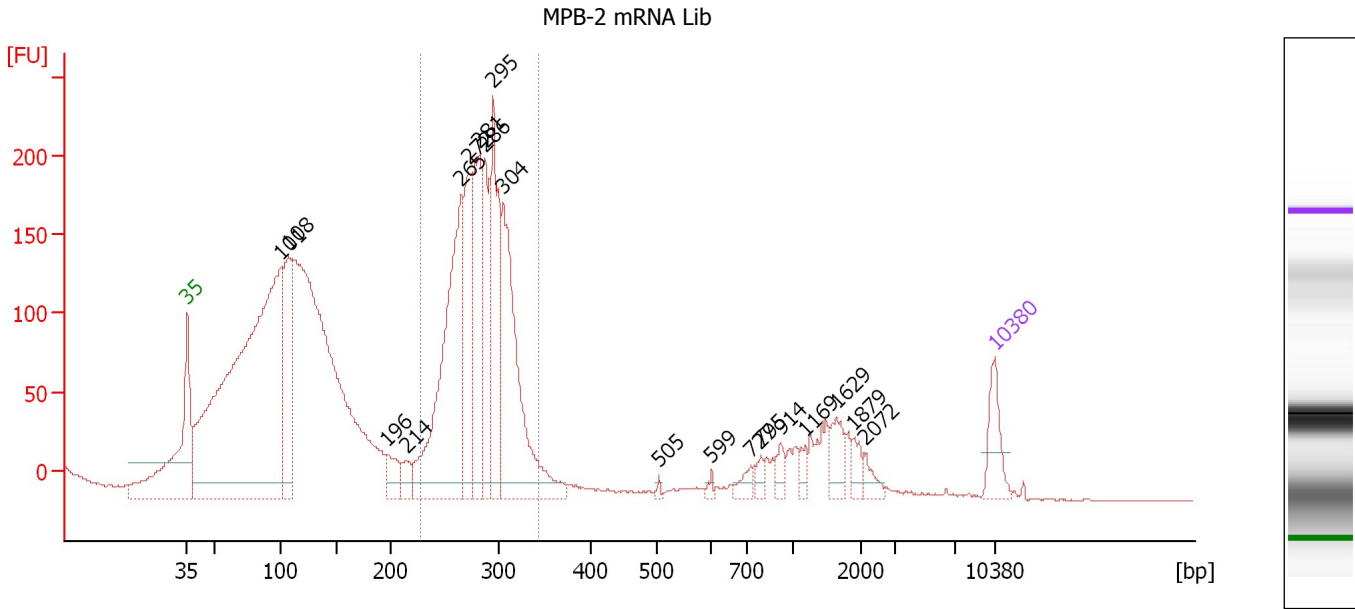
Region table for sample 6 : PPB-2 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
208	353	266	5,376.2	938.33	945.2	91	9.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
 Modified: 6/25/2013 4:01:06 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 7 : MPB-2 mRNA Lib

Height Threshold [FU] : 10

Overall Results for sample 7 : MPB-2 mRNA Lib

Number of peaks found: 19 Corr. Area 1: 1,886.7
 Noise: 0.4

Peak table for sample 7 : MPB-2 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	101	2,523.32	37,791.8	
3	108	457.65	6,403.4	
4	196	83.53	647.3	
5	214	56.03	397.2	
6	265	815.38	4,658.3	
7	272	314.29	1,749.9	
8	281	404.36	2,179.9	
9	286	272.64	1,441.9	
10	295	417.76	2,146.4	
11	304	616.25	3,066.5	
12	505	7.08	21.2	
13	599	11.18	28.3	
14	727	30.05	62.7	
15	795	24.91	47.5	
16	914	30.82	51.1	
17	1,169	25.43	33.0	
18	1,629	60.99	56.7	
19	1,879	30.01	24.2	
20	2,072	28.15	20.6	
21	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
Modified: 6/25/2013 4:01:06 PM

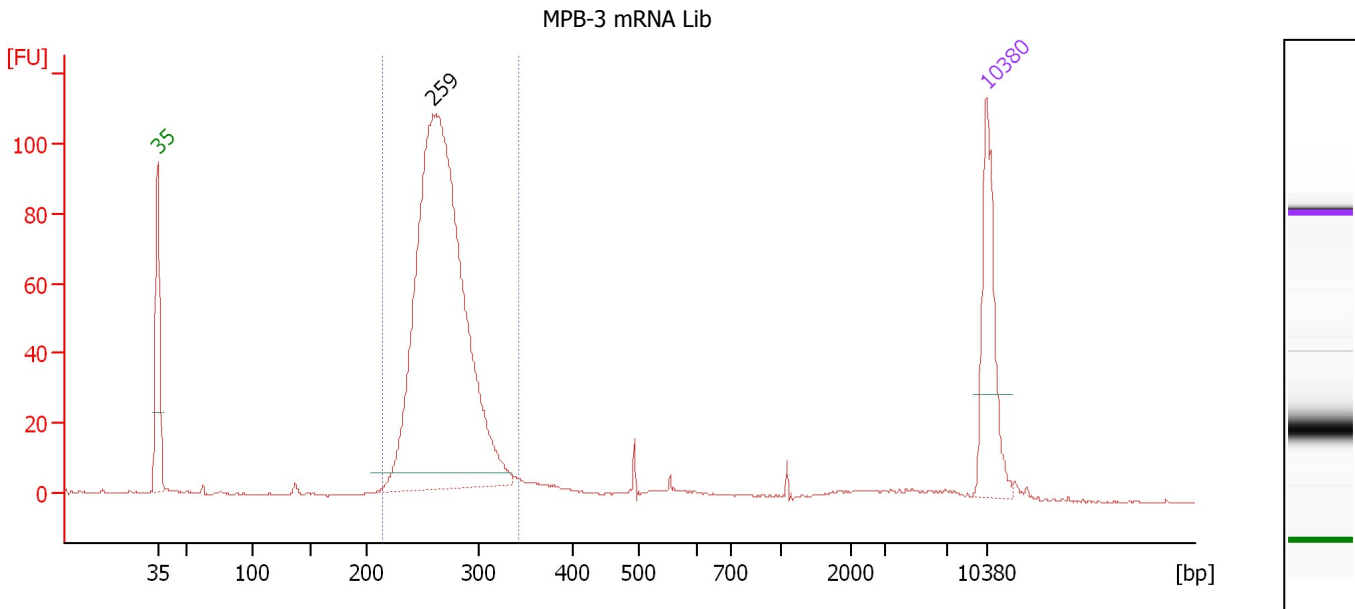
Electropherogram Summary Continued ...**... Region table for sample 7 : MPB-2 mRNA Lib**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
227	342	283	13,704.4	2,542.27	1,886.7	37	8.1	■

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
 Modified: 6/25/2013 4:01:06 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : MPB-3 mRNA Lib

Number of peaks found: 1 Corr. Area 1: 826.9
 Noise: 0.2

Peak table for sample 8 : MPB-3 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	259	806.30	4,712.1	
3	10,380	75.00	10.9	Upper Marker

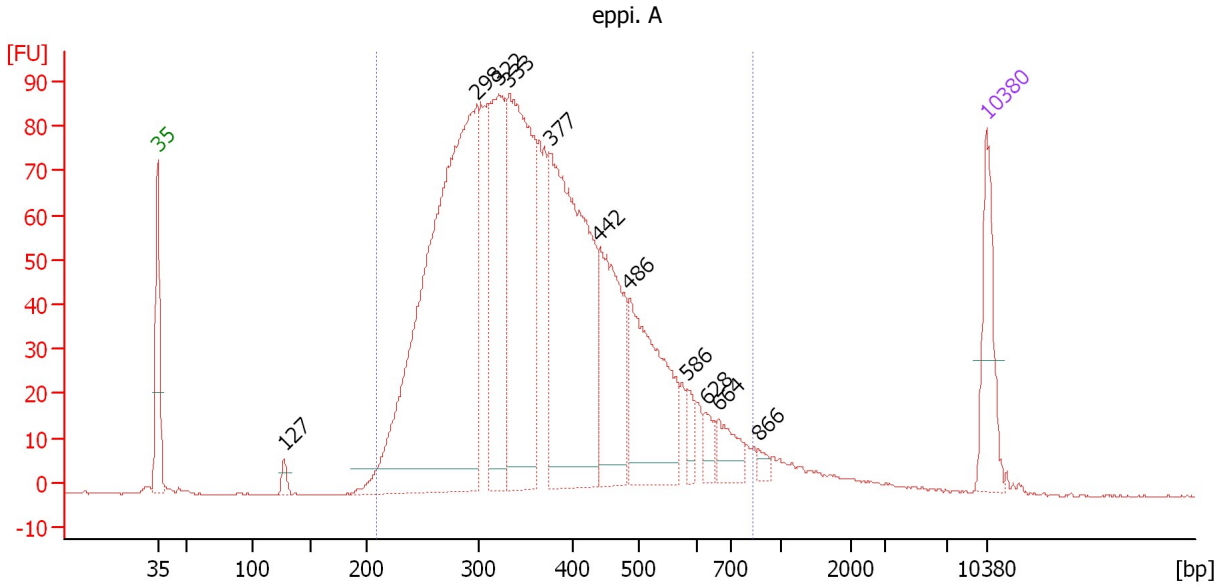
Region table for sample 8 : MPB-3 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
214	344	269	4,694.8	829.46	826.9	86	8.3	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
 Modified: 6/25/2013 4:01:06 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : eppi. A

Number of peaks found: 11 Corr. Area 1: 2,014.7
 Noise: 0.2

Peak table for sample 9 : eppi. A

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	127	15.34	183.3	
3	298	985.02	5,002.1	
4	322	292.73	1,375.8	
5	333	454.58	2,068.1	
6	377	510.66	2,049.7	
7	442	204.27	700.9	
8	486	229.95	716.2	
9	586	22.09	57.2	
10	628	21.26	51.3	
11	664	38.44	87.7	
12	866	8.91	15.6	
13	10,380	75.00	10.9	Upper Marker

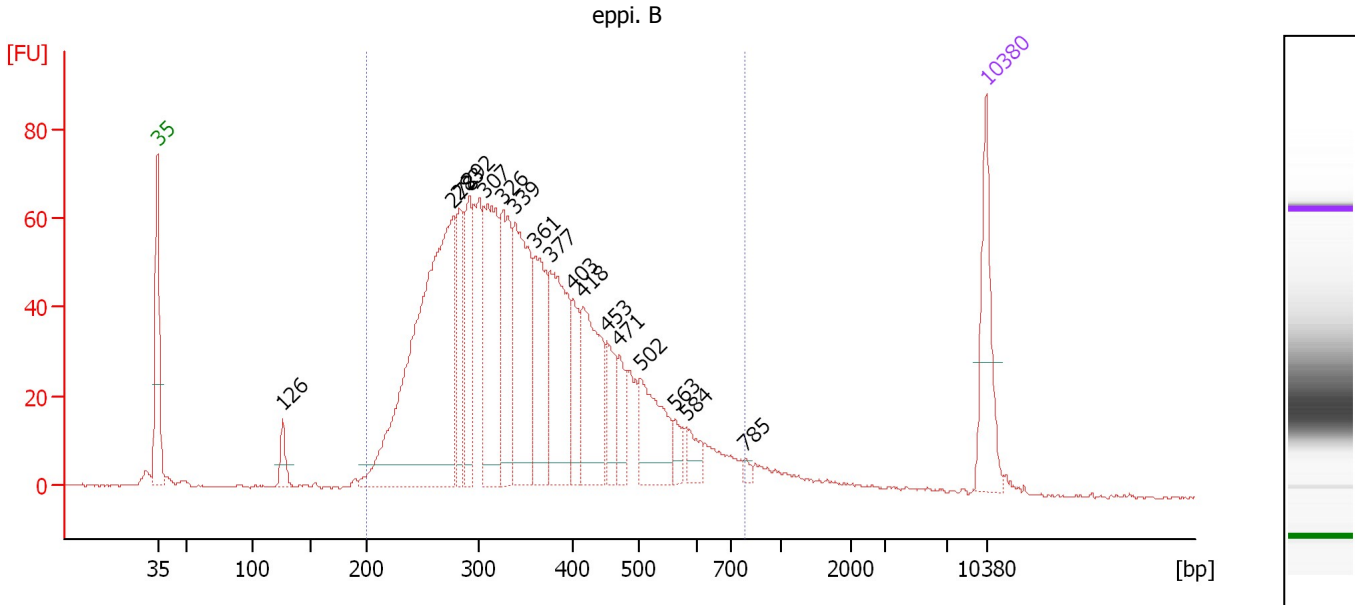
Region table for sample 9 : eppi. A

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
209	836	376	13,067.6	2,944.68	2,014.7	98	28.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
 Modified: 6/25/2013 4:01:06 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : eppi. B

Number of peaks found: 17 Corr. Area 1: 1,555.8
 Noise: 0.3

Peak table for sample 10 : eppi. B

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	126	29.61	357.1	
3	278	580.94	3,167.0	
4	283	91.23	487.6	
5	292	105.59	547.7	
6	307	193.18	952.4	
7	326	135.85	630.8	
8	339	202.93	906.0	
9	361	131.78	553.4	
10	377	164.92	663.1	
11	403	55.88	210.4	
12	418	134.73	488.9	
13	453	47.81	160.1	
14	471	33.75	108.6	
15	502	92.22	278.3	
16	563	18.83	50.7	
17	584	22.27	57.8	
18	785	5.74	11.1	
19	10,380	75.00	10.9	Upper Marker

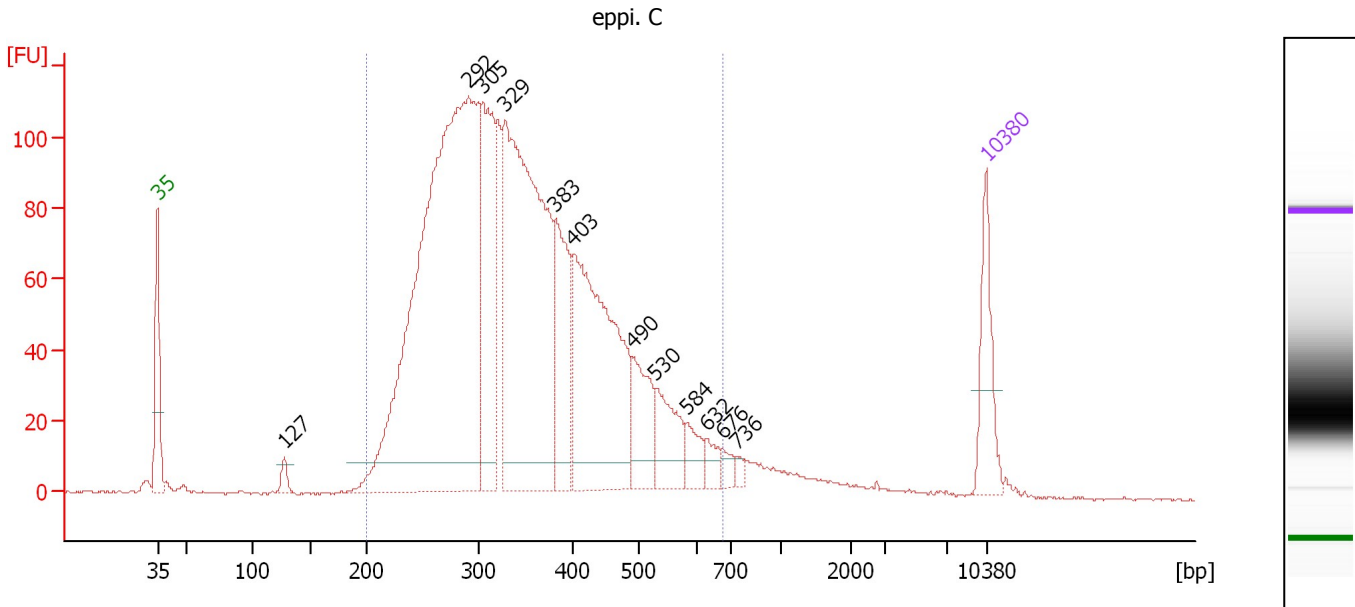
Region table for sample 10 : eppi. B

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	784	363	10,786.9	2,341.82	1,555.8	95	28.6	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
 Modified: 6/25/2013 4:01:06 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 11 : eppi. C

Height Threshold [FU] : 8

Overall Results for sample 11 : eppi. C

Number of peaks found: 12 Corr. Area 1: 2,540.1
 Noise: 0.4

Peak table for sample 11 : eppi. C

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	127	20.66	246.7	
3	292	1,362.39	7,073.6	
4	305	302.90	1,506.4	
5	329	769.87	3,550.8	
6	383	179.97	712.5	
7	403	433.22	1,630.8	
8	490	98.63	304.8	
9	530	86.09	246.2	
10	584	34.66	90.0	
11	632	22.29	53.5	
12	676	14.15	31.7	
13	736	8.79	18.1	
14	10,380	75.00	10.9	Upper Marker

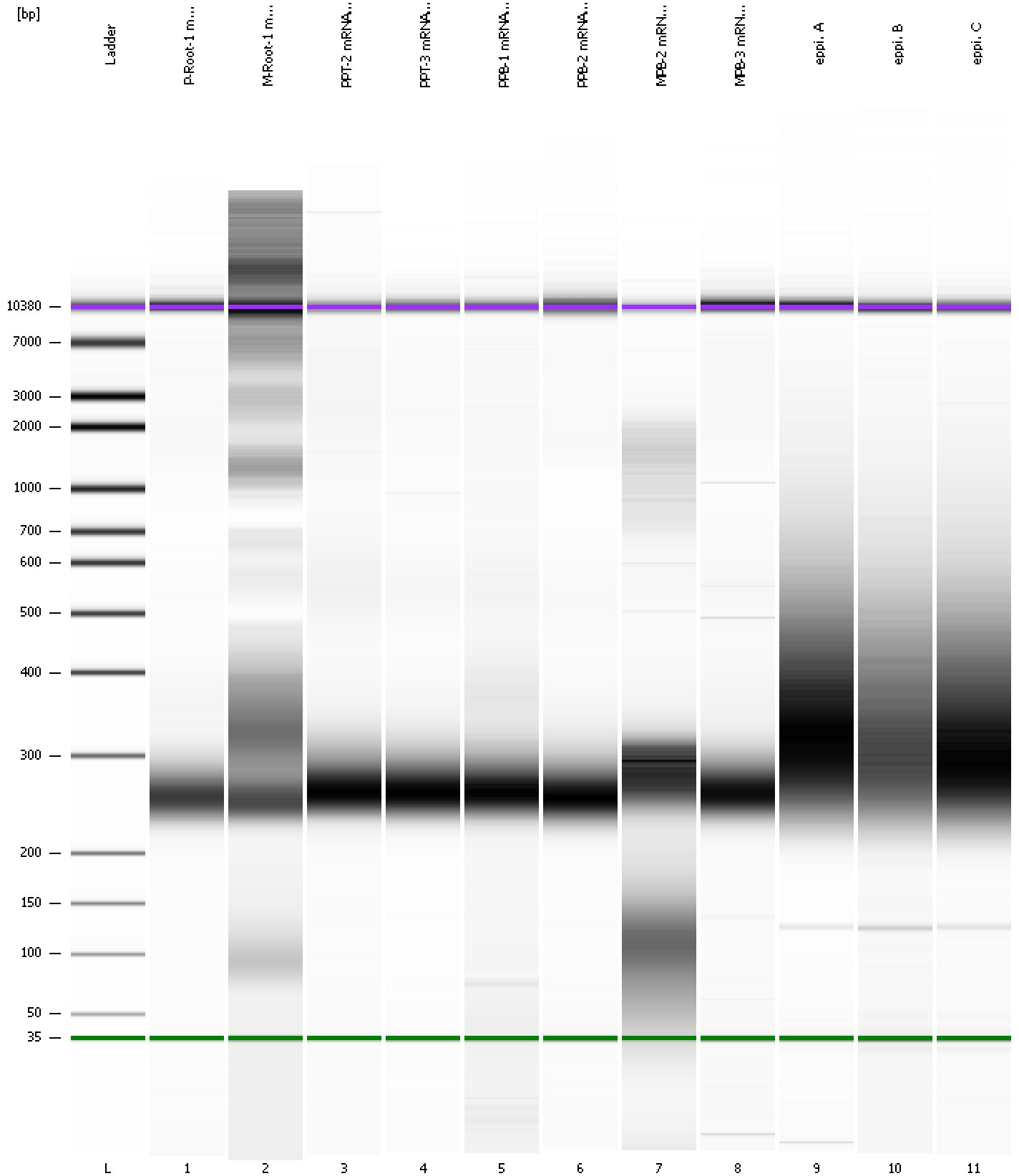
Region table for sample 11 : eppi. C

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	677	354	16,243.7	3,477.97	2,540.1	95	26.5	Blue

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
Modified: 6/25/2013 4:01:06 PM

Gel Image

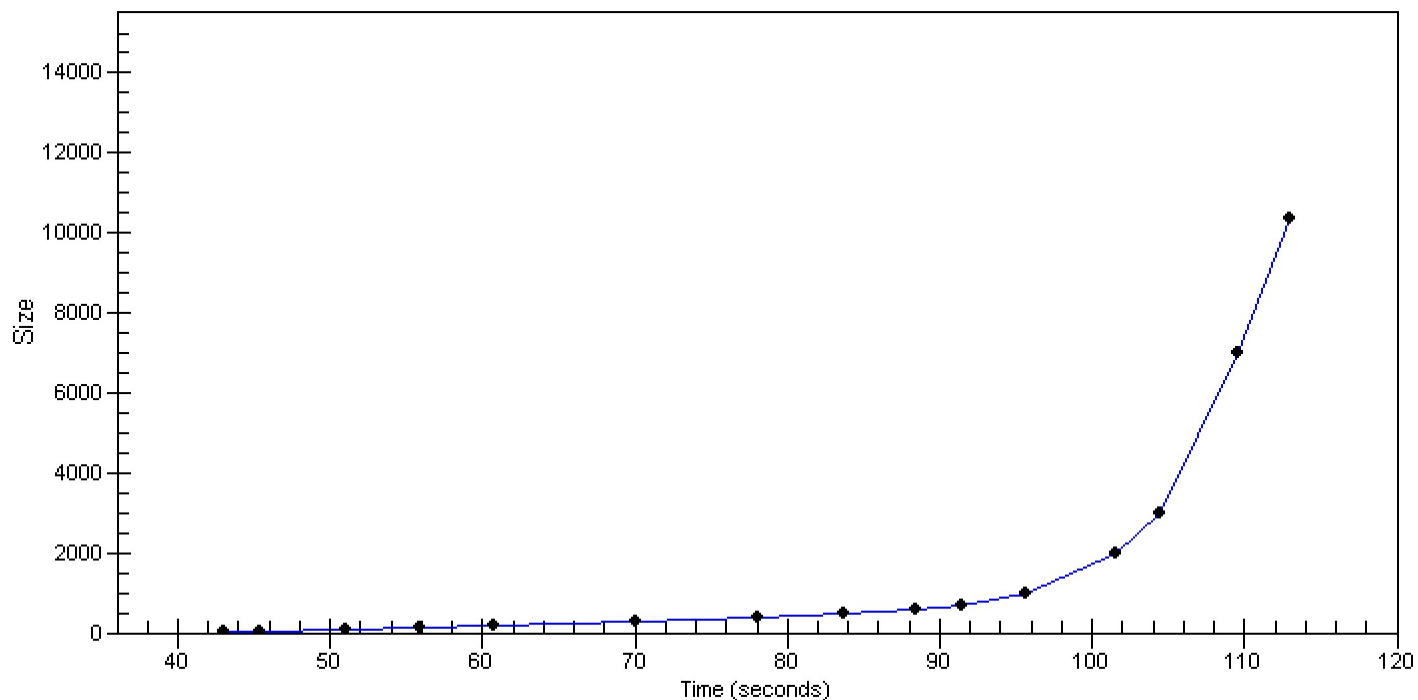


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
Modified: 6/25/2013 4:01:06 PM

Curves

Standard Curve



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad

Created: 6/25/2013 3:15:23 PM
 Modified: 6/25/2013 4:01:06 PM

Run Logbook

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 12)		Instrument	Run		6/25/2013 3:56:42 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2013-06-25\2013-06-25_005.xad)		Instrument	Run		6/25/2013 3:15:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		6/25/2013 3:15:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		6/25/2013 3:15:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		6/25/2013 3:15:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		6/25/2013 3:15:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		6/25/2013 3:15:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		6/25/2013 3:15:29 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1