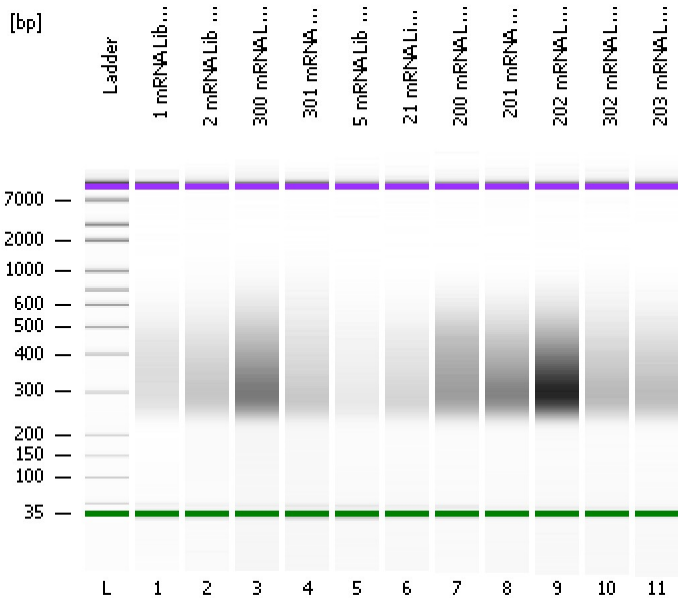


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
Modified: 1/8/2013 3:50:12 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

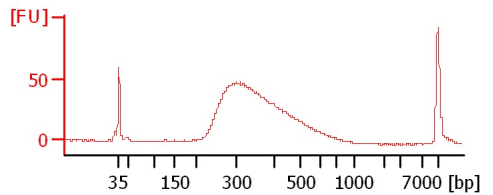
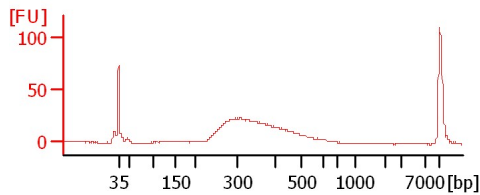
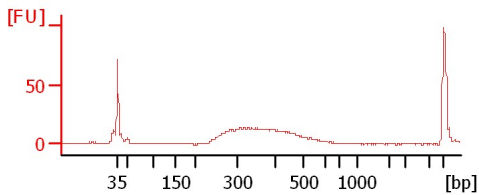
Chip Information:

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

1 mRNA Lib (O'Neil)

2 mRNA Lib (O'Neil)

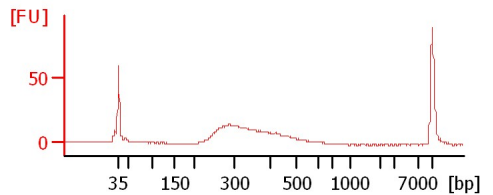
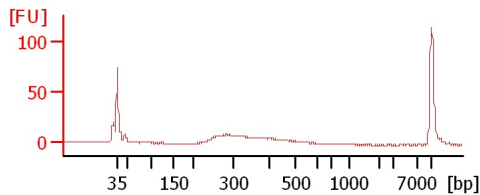
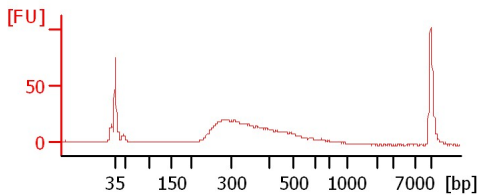
300 mRNA Lib (O'Neil)



301 mRNA Lib (O'Neil)

5 mRNA Lib (O'Neil)

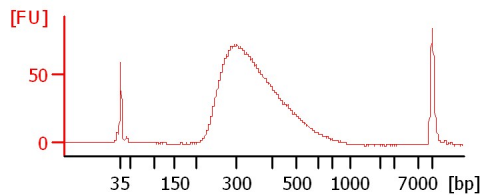
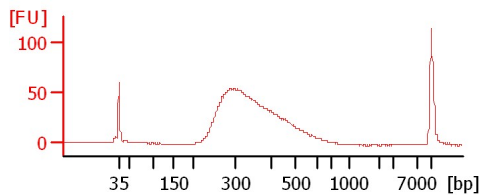
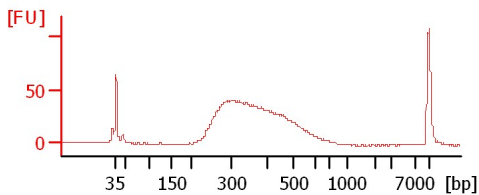
21 mRNA Lib (O'Neil)



200 mRNA Lib (O'Neil)

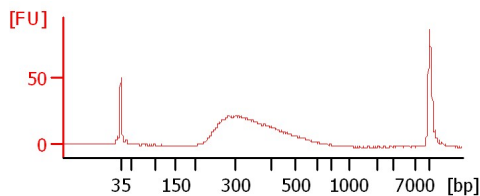
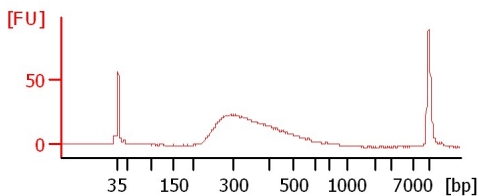
201 mRNA Lib (O'Neil)

202 mRNA Lib (O'Neil)



302 mRNA Lib (O'Neil)

203 mRNA Lib (O'Neil)



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
 Modified: 1/8/2013 3:50:12 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
1 mRNA Lib (O'Neil)		<input type="checkbox"/>	✓			
2 mRNA Lib (O'Neil)		<input type="checkbox"/>	✓			
300 mRNA Lib (O'Neil)		<input type="checkbox"/>	✓			
301 mRNA Lib (O'Neil)		<input type="checkbox"/>	✓			
5 mRNA Lib (O'Neil)		<input type="checkbox"/>	✓			
21 mRNA Lib (O'Neil)		<input type="checkbox"/>	✓			
200 mRNA Lib (O'Neil)		<input type="checkbox"/>	✓			
201 mRNA Lib (O'Neil)		<input type="checkbox"/>	✓			
202 mRNA Lib (O'Neil)		<input type="checkbox"/>	✓			
302 mRNA Lib (O'Neil)		<input type="checkbox"/>	✓			
203 mRNA Lib (O'Neil)		<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\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
Modified: 1/8/2013 3:50:12 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] : 20
Area Threshold : 0.1
Width Threshold [s] : 0.6
Baseline Plateau [s] : 0.5

Filter Settings

Filter Width [s] : 0.5
Polynomial Order : 4

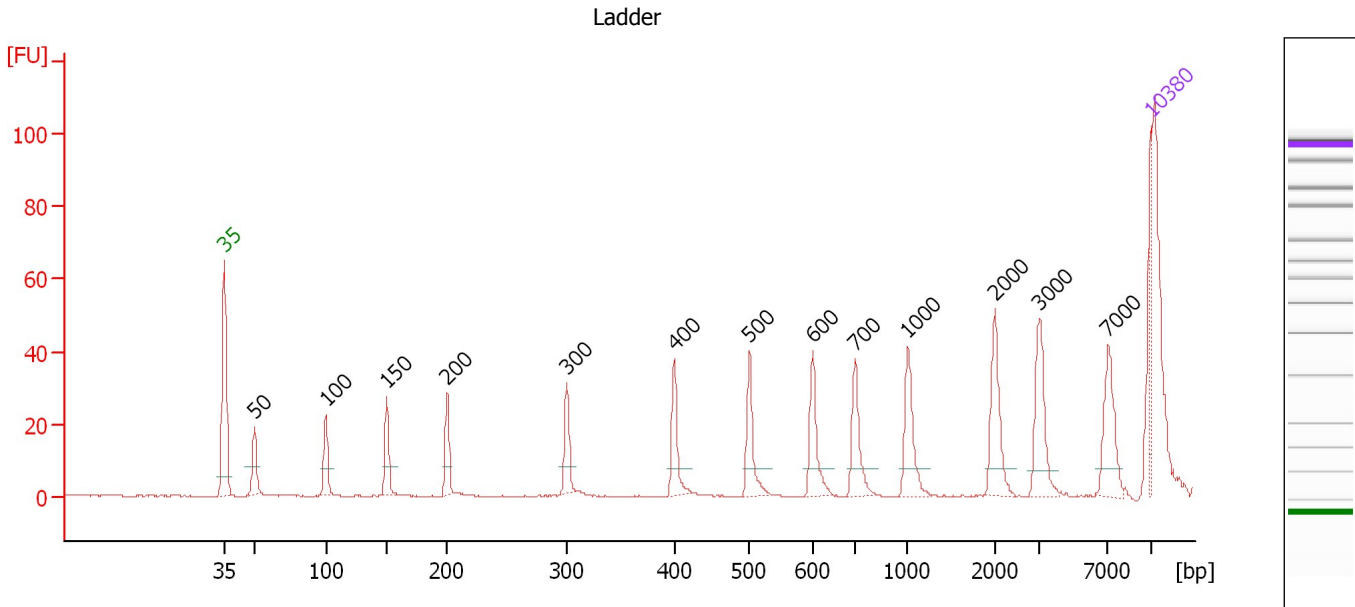
Ladder

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\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
 Modified: 1/8/2013 3:50:12 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

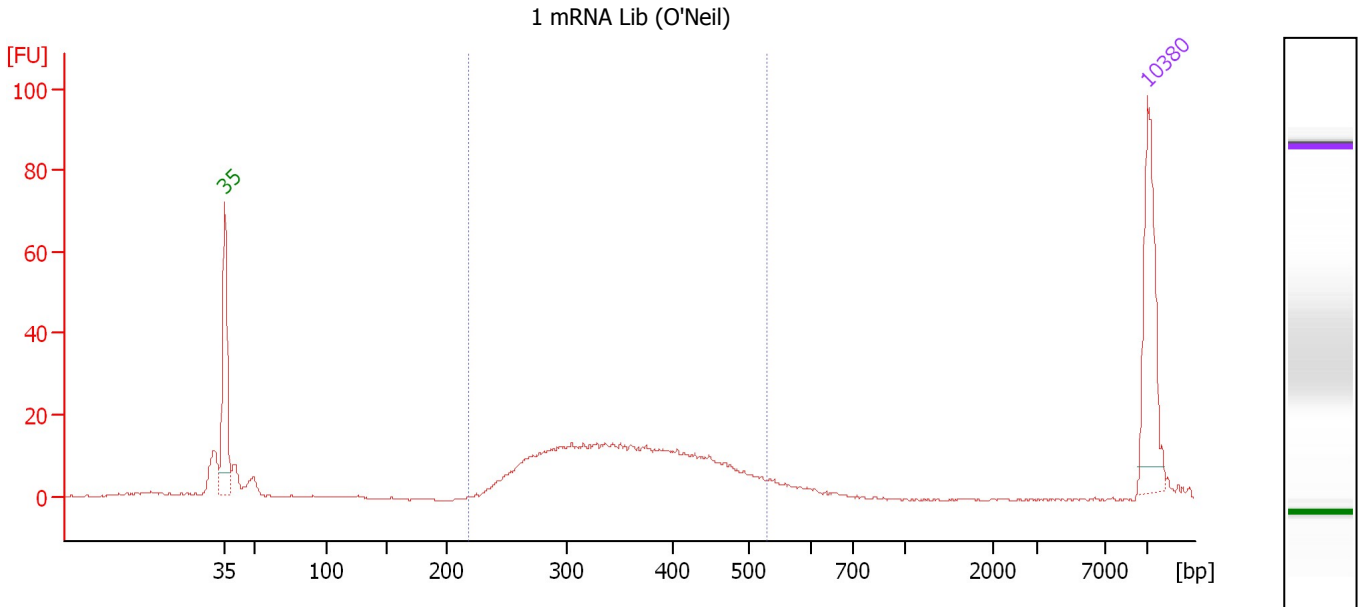
Peak table for Ladder

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\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
 Modified: 1/8/2013 3:50:12 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : 1 mRNA Lib (O'Neil)

Number of peaks found: 0 Corr. Area 1: 267.7
 Noise: 0.2

Peak table for sample 1 : 1 mRNA Lib (O'Neil)

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

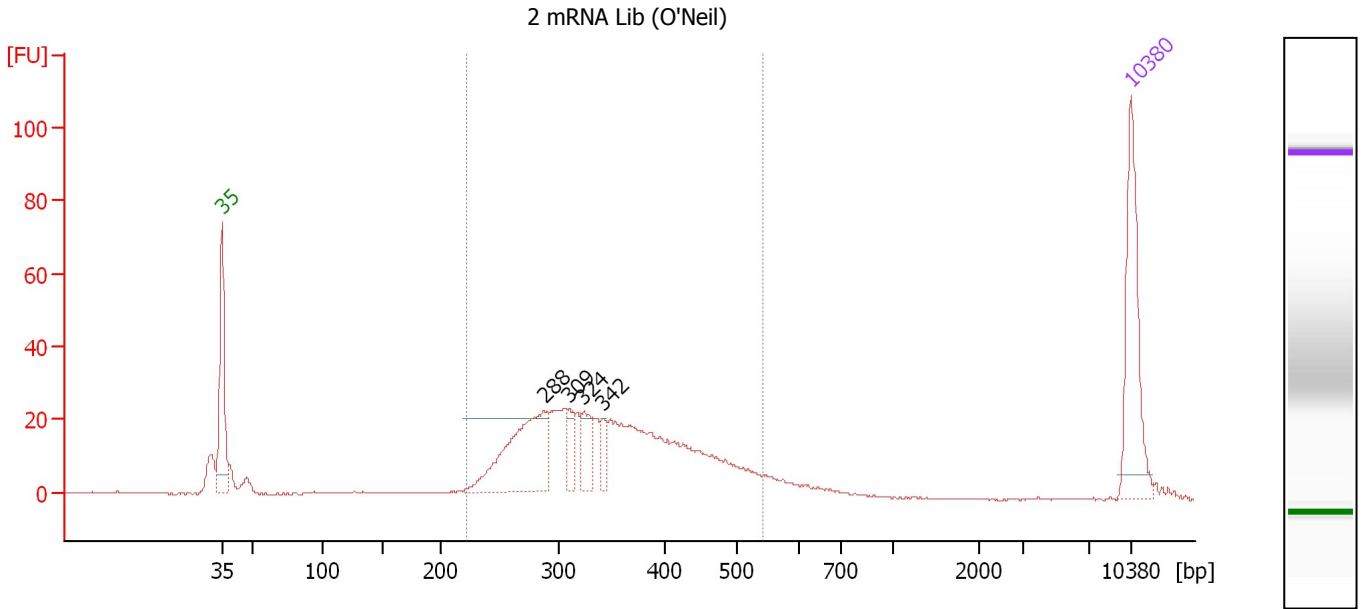
Region table for sample 1 : 1 mRNA Lib (O'Neil)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
219	531	358	1,524.9	341.99	267.7	82	19.3	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
 Modified: 1/8/2013 3:50:12 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : 2 mRNA Lib (O'Neil)

Number of peaks found: 4 Corr. Area 1: 502.1
 Noise: 0.2

Peak table for sample 2 : 2 mRNA Lib (O'Neil)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	288	142.45	750.4	
3	309	20.45	100.1	
4	324	33.30	155.9	
5	342	16.73	74.1	
6	10,380	75.00	10.9	Upper Marker

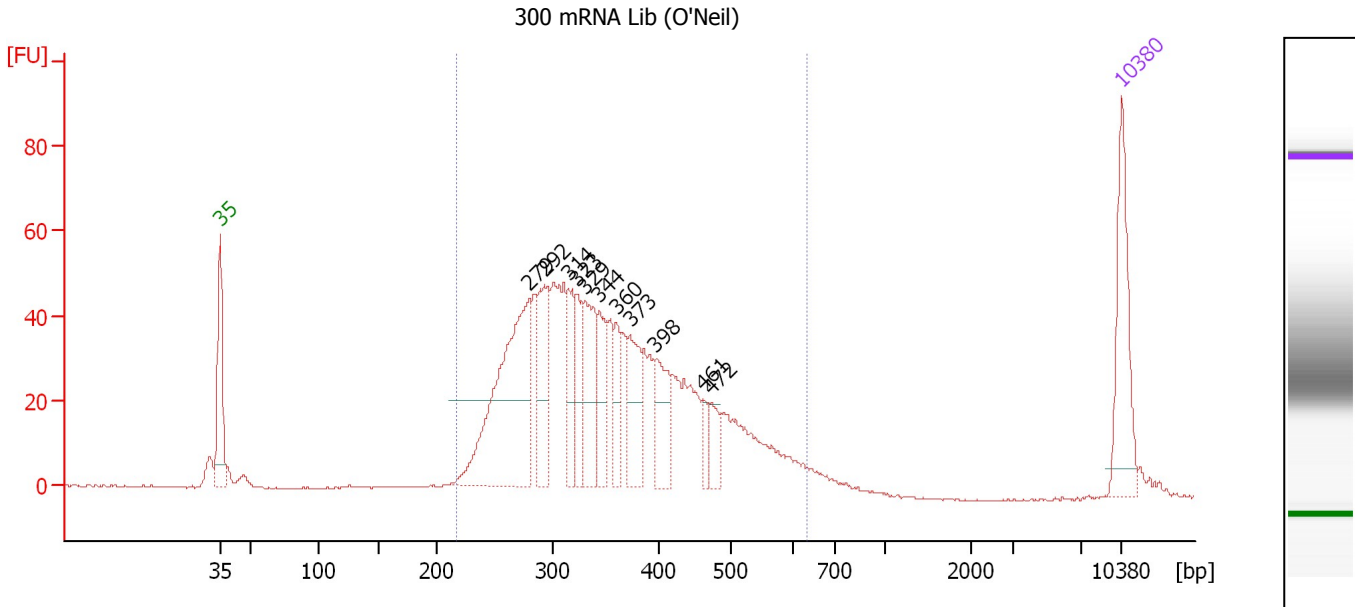
Region table for sample 2 : 2 mRNA Lib (O'Neil)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
221	542	351	2,527.0	551.67	502.1	87	20.7	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
 Modified: 1/8/2013 3:50:12 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : 300 mRNA Lib (O'Neil)

Number of peaks found: 11 Corr. Area 1: 1,085.1
 Noise: 0.1

Peak table for sample 3 : 300 mRNA Lib (O'Neil)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	279	291.29	1,579.8	
3	292	97.05	503.2	
4	314	58.89	283.9	
5	323	48.72	228.6	
6	329	98.44	452.7	
7	344	61.00	268.9	
8	360	37.76	158.9	
9	373	68.60	278.5	
10	398	62.60	238.5	
11	461	17.85	58.7	
12	472	25.18	80.9	
13	10,380	75.00	10.9	Upper Marker

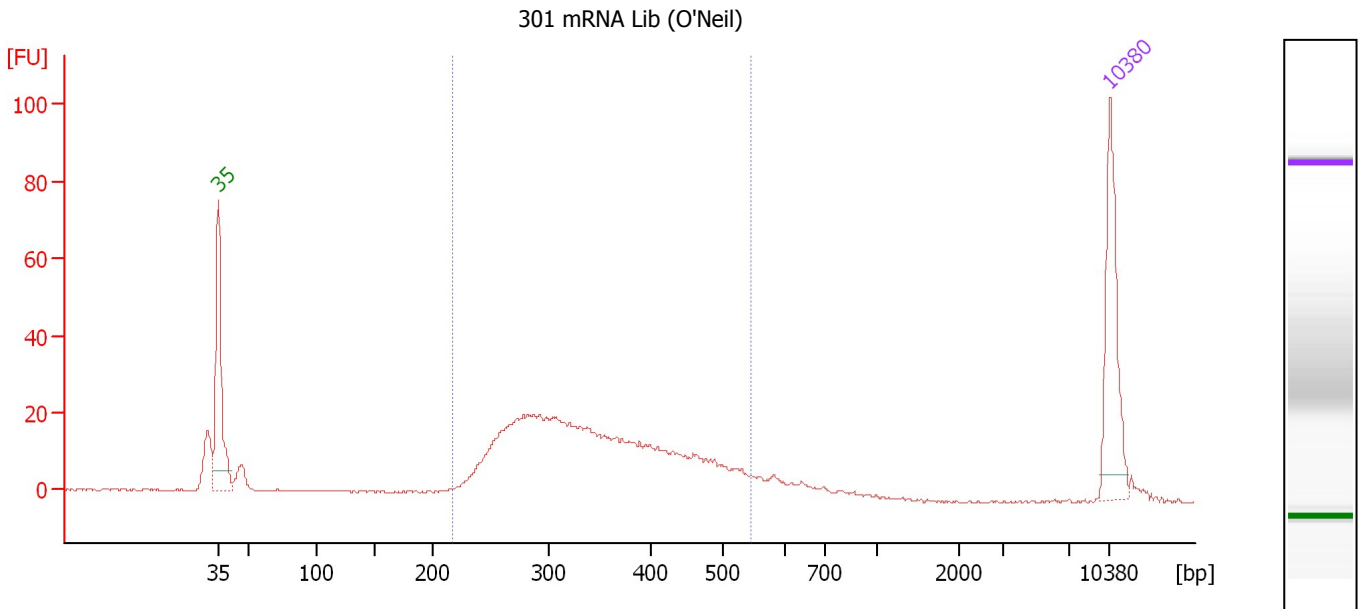
Region table for sample 3 : 300 mRNA Lib (O'Neil)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
218	633	360	6,538.7	1,440.07	1,085.1	95	24.2	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
 Modified: 1/8/2013 3:50:12 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : 301 mRNA Lib (O'Neil)

Number of peaks found: 0 Corr. Area 1: 454.0
 Noise: 0.2

Peak table for sample 4 : 301 mRNA Lib (O'Neil)

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

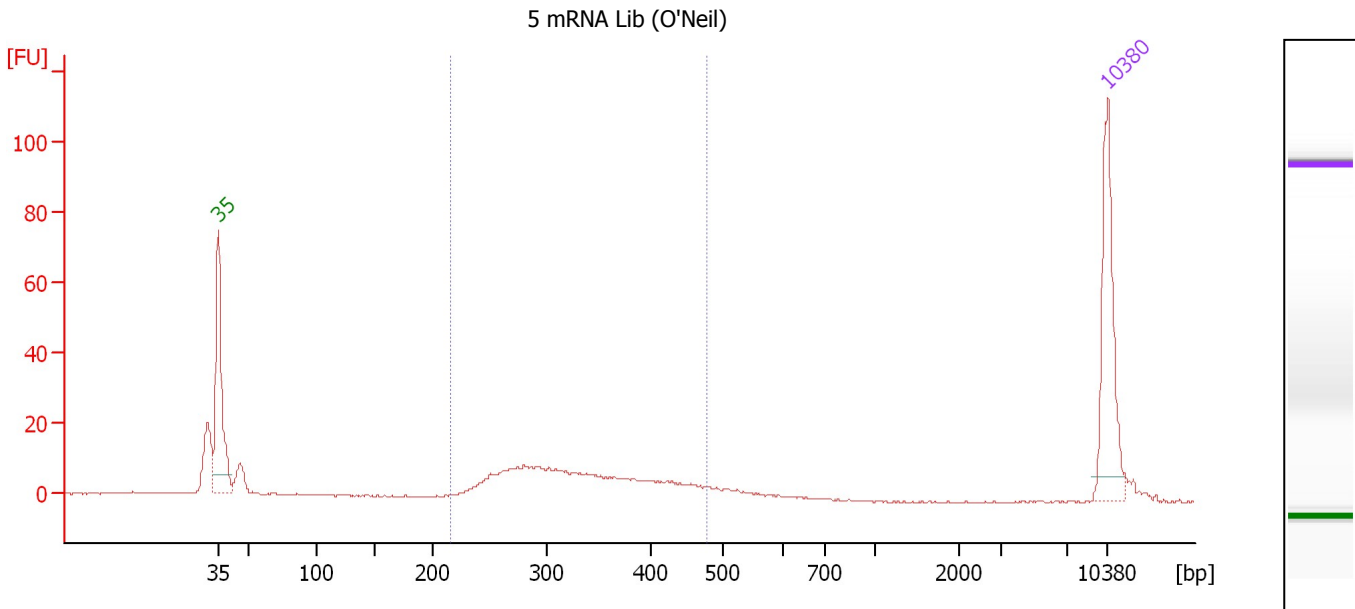
Region table for sample 4 : 301 mRNA Lib (O'Neil)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
217	544	349	2,583.5	556.75	454.0	79	22.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
 Modified: 1/8/2013 3:50:12 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 5 : 5 mRNA Lib (O'Neil)

Height Threshold [FU] : 25 Baseline Plateau [s] : 1

Overall Results for sample 5 : 5 mRNA Lib (O'Neil)

Number of peaks found: 0 Corr. Area 1: 159.5
 Noise: 0.2

Peak table for sample 5 : 5 mRNA Lib (O'Neil)

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

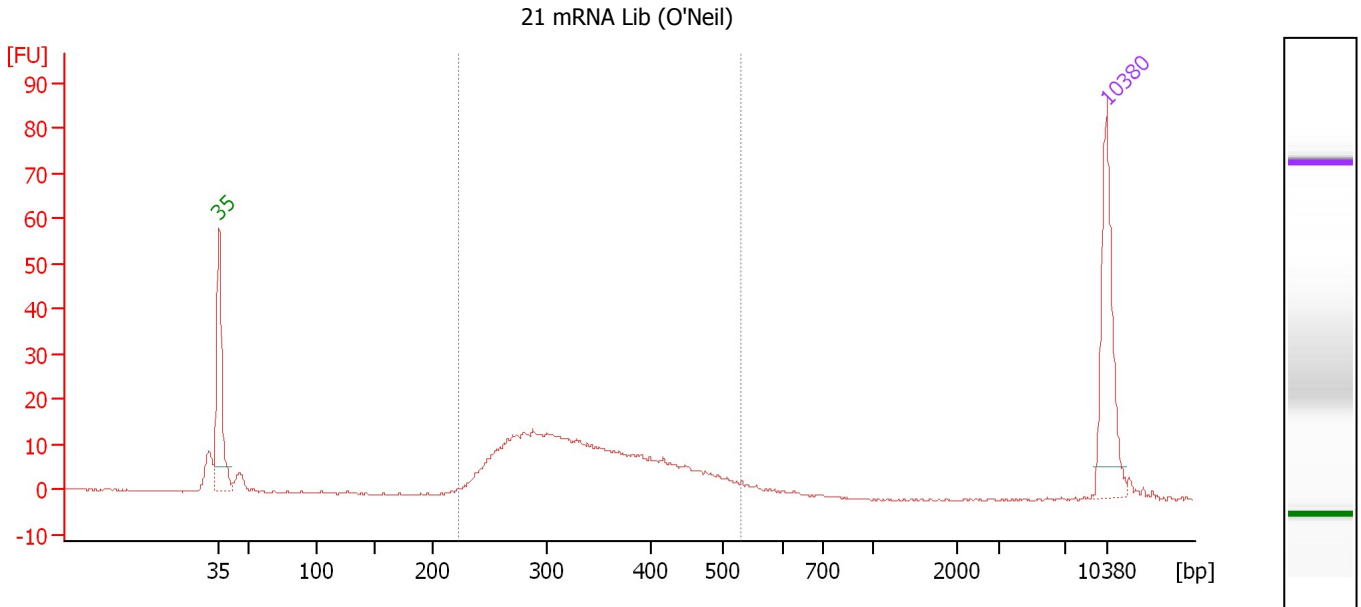
Region table for sample 5 : 5 mRNA Lib (O'Neil)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
216	478	331	849.4	176.62	159.5	66	18.7	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
 Modified: 1/8/2013 3:50:12 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : 21 mRNA Lib (O'Neil)

Number of peaks found: 0 Corr. Area 1: 269.1
 Noise: 0.2

Peak table for sample 6 : 21 mRNA Lib (O'Neil)

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

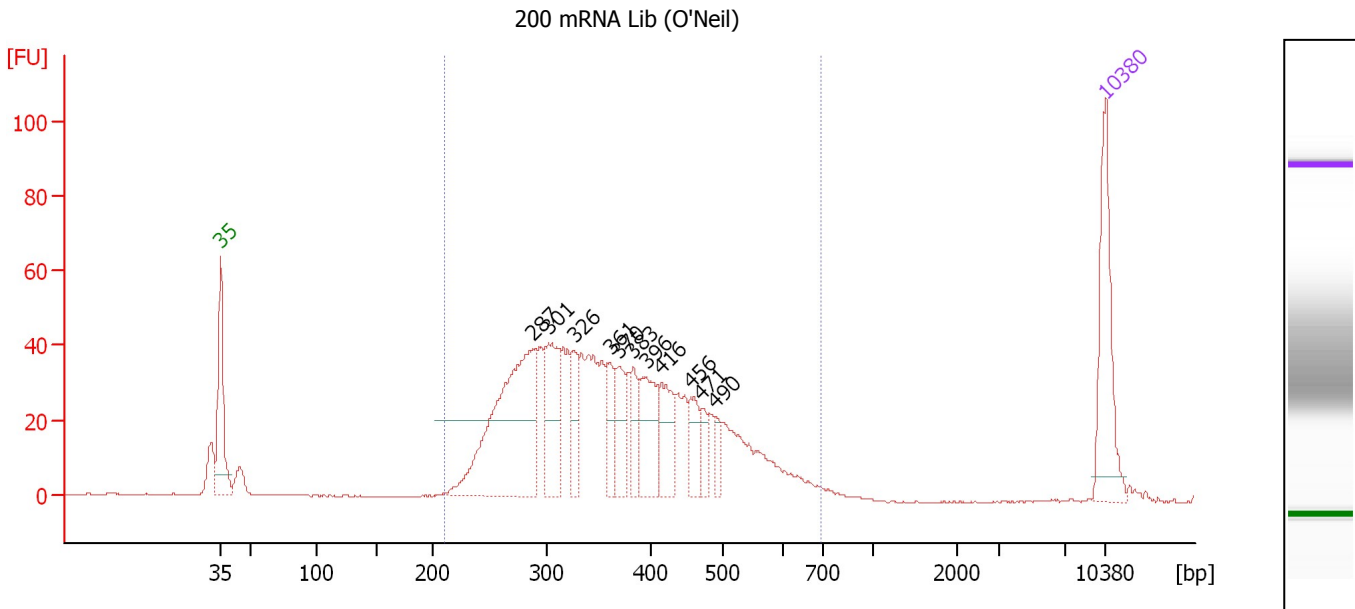
Region table for sample 6 : 21 mRNA Lib (O'Neil)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
223	532	342	1,851.5	395.29	269.1	89	20.6	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
 Modified: 1/8/2013 3:50:12 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : 200 mRNA Lib (O'Neil)

Number of peaks found: 11 Corr. Area 1: 1,020.5
 Noise: 0.2

Peak table for sample 7 : 200 mRNA Lib (O'Neil)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	287	275.20	1,451.3	
3	301	89.12	447.9	
4	326	41.63	193.3	
5	361	37.22	156.4	
6	370	46.35	189.8	
7	383	33.12	130.9	
8	396	67.96	259.8	
9	416	51.87	189.1	
10	456	33.93	112.8	
11	471	17.14	55.1	
12	490	15.25	47.2	
13	10,380	75.00	10.9	Upper Marker

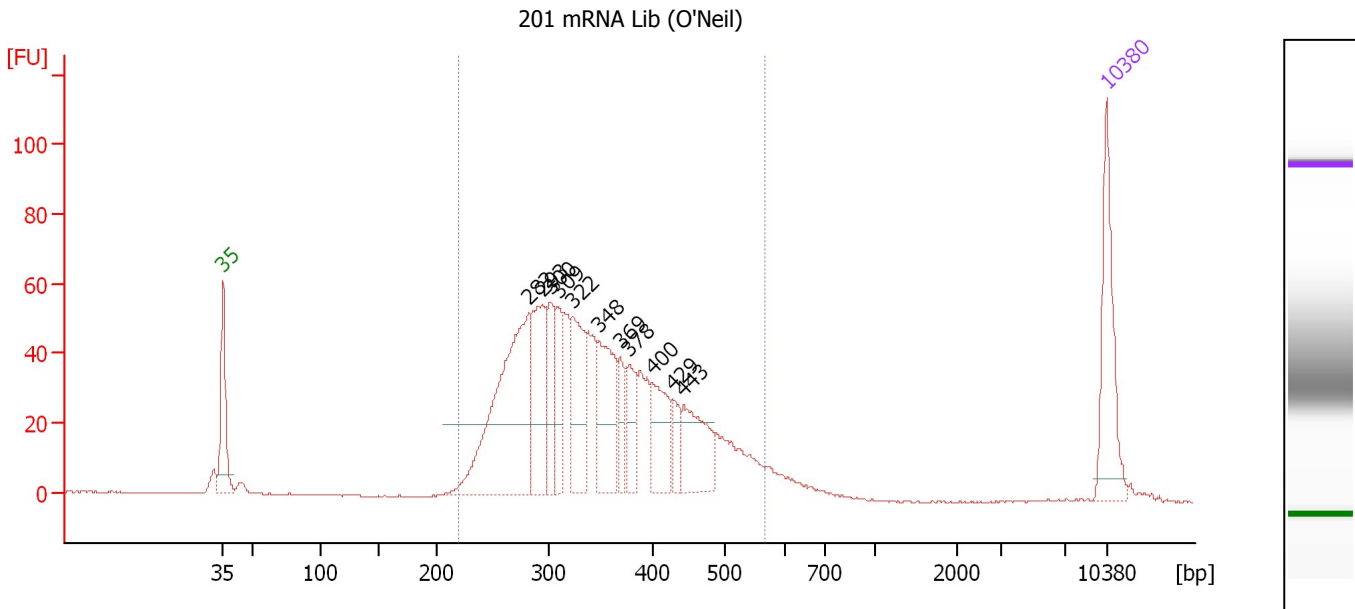
Region table for sample 7 : 200 mRNA Lib (O'Neil)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
210	692	373	5,095.6	1,150.73	1,020.5	95	25.5	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
 Modified: 1/8/2013 3:50:12 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : 201 mRNA Lib (O'Neil)

Number of peaks found: 11 Corr. Area 1: 1,136.4
 Noise: 0.1

Peak table for sample 8 : 201 mRNA Lib (O'Neil)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	282	300.11	1,614.1	
3	293	121.19	625.8	
4	300	62.30	314.2	
5	309	55.79	273.7	
6	322	99.33	467.0	
7	348	107.43	467.4	
8	369	34.17	140.3	
9	378	45.41	182.1	
10	400	62.19	235.8	
11	429	25.55	90.4	
12	443	77.49	264.8	
13	10,380	75.00	10.9	Upper Marker

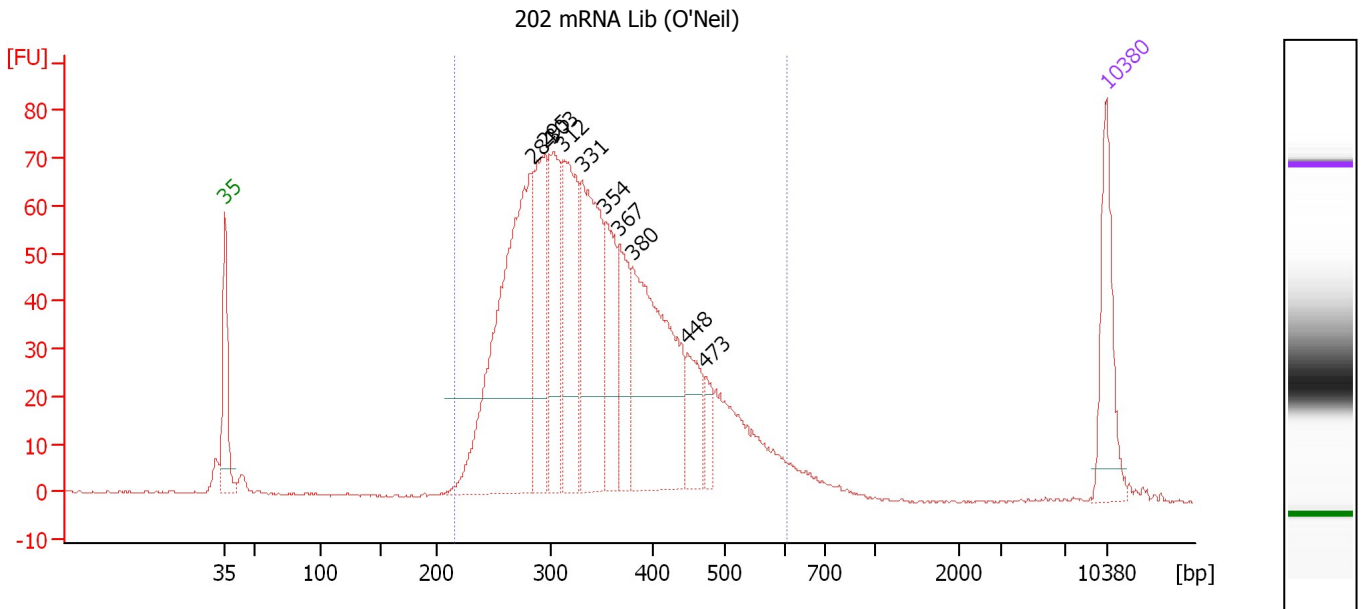
Region table for sample 8 : 201 mRNA Lib (O'Neil)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
220	567	350	5,983.3	1,299.84	1,136.4	95	21.8	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
 Modified: 1/8/2013 3:50:12 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : 202 mRNA Lib (O'Neil)

Number of peaks found: 10 Corr. Area 1: 1,480.8
 Noise: 0.1

Peak table for sample 9 : 202 mRNA Lib (O'Neil)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	284	497.65	2,654.3	
3	295	165.85	852.2	
4	303	151.98	760.9	
5	312	203.97	990.6	
6	331	240.43	1,101.5	
7	354	112.06	480.2	
8	367	94.89	392.2	
9	380	296.95	1,185.2	
10	448	64.83	219.5	
11	473	28.17	90.3	
12	10,380	75.00	10.9	Upper Marker

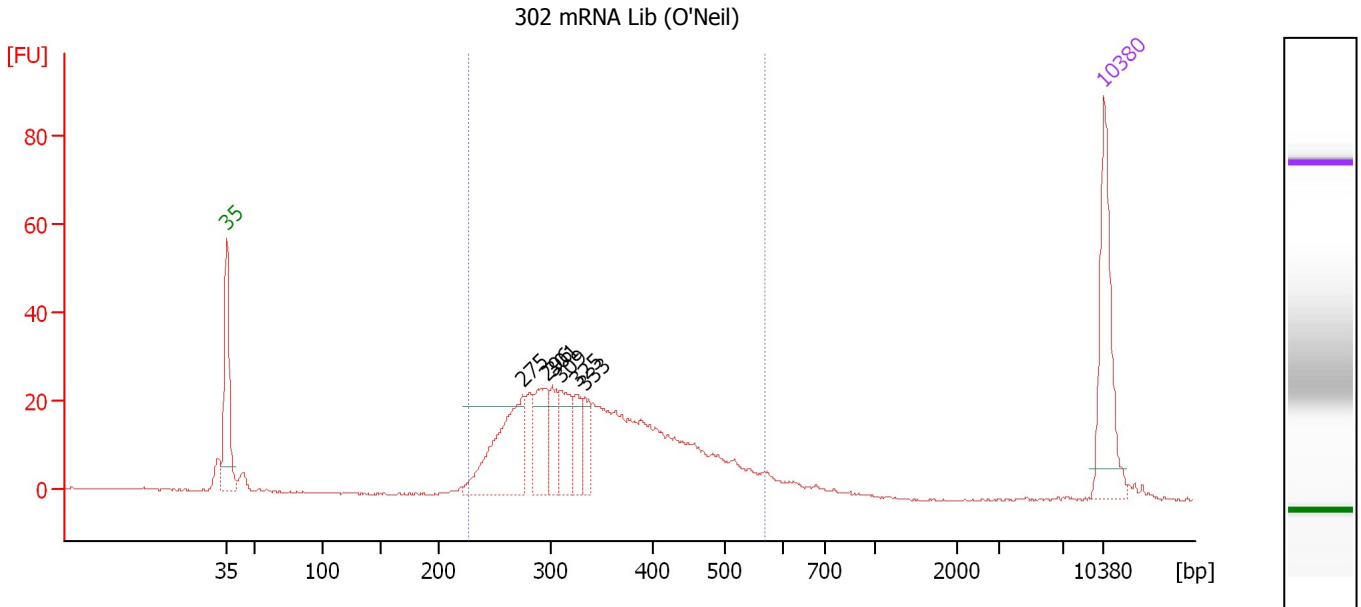
Region table for sample 9 : 202 mRNA Lib (O'Neil)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
216	605	352	9,548.5	2,076.08	1,480.8	96	22.8	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
 Modified: 1/8/2013 3:50:12 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : 302 mRNA Lib (O'Neil)

Number of peaks found: 6 Corr. Area 1: 489.5
 Noise: 0.2

Peak table for sample 10 : 302 mRNA Lib (O'Neil)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	275	137.12	754.6	
3	296	63.18	323.9	
4	301	39.00	196.1	
5	309	51.13	251.0	
6	325	32.45	151.3	
7	333	28.53	129.9	
8	10,380	75.00	10.9	Upper Marker

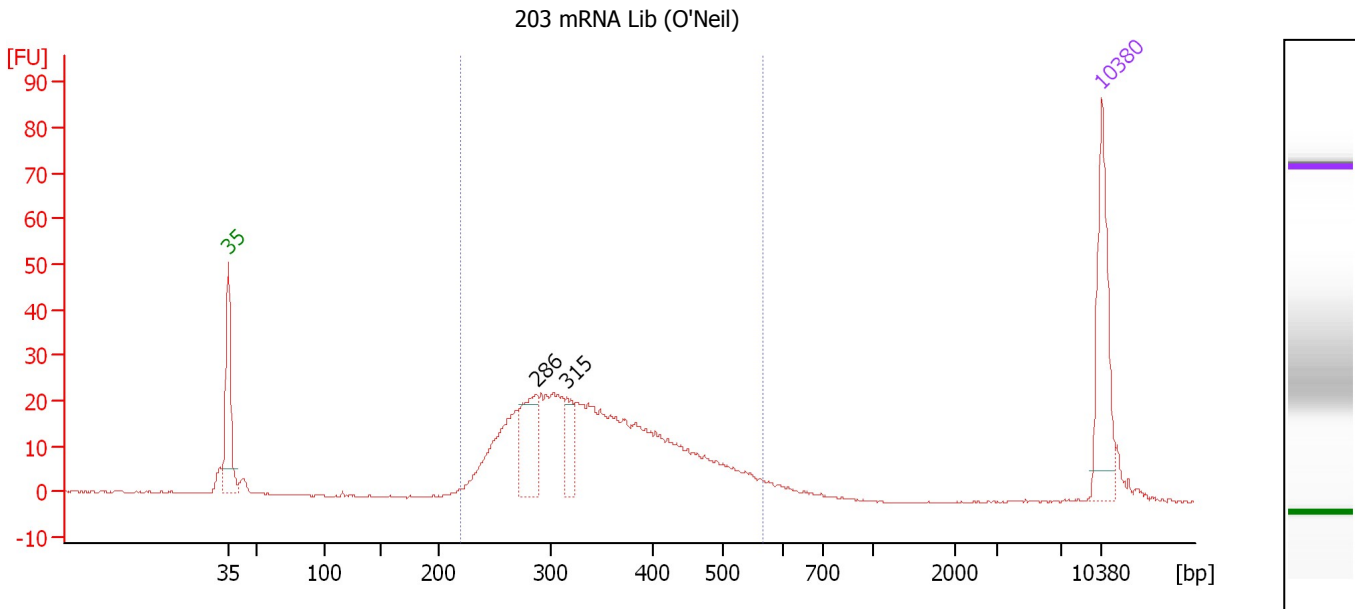
Region table for sample 10 : 302 mRNA Lib (O'Neil)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
228	567	352	3,046.8	665.31	489.5	93	21.8	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
 Modified: 1/8/2013 3:50:12 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : 203 mRNA Lib (O'Neil)

Number of peaks found: 2 Corr. Area 1: 467.6
 Noise: 0.2

Peak table for sample 11 : 203 mRNA Lib (O'Neil)

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	286	81.43	430.8	
3	315	32.13	154.4	
4	10,380	75.00	10.9	Upper Marker

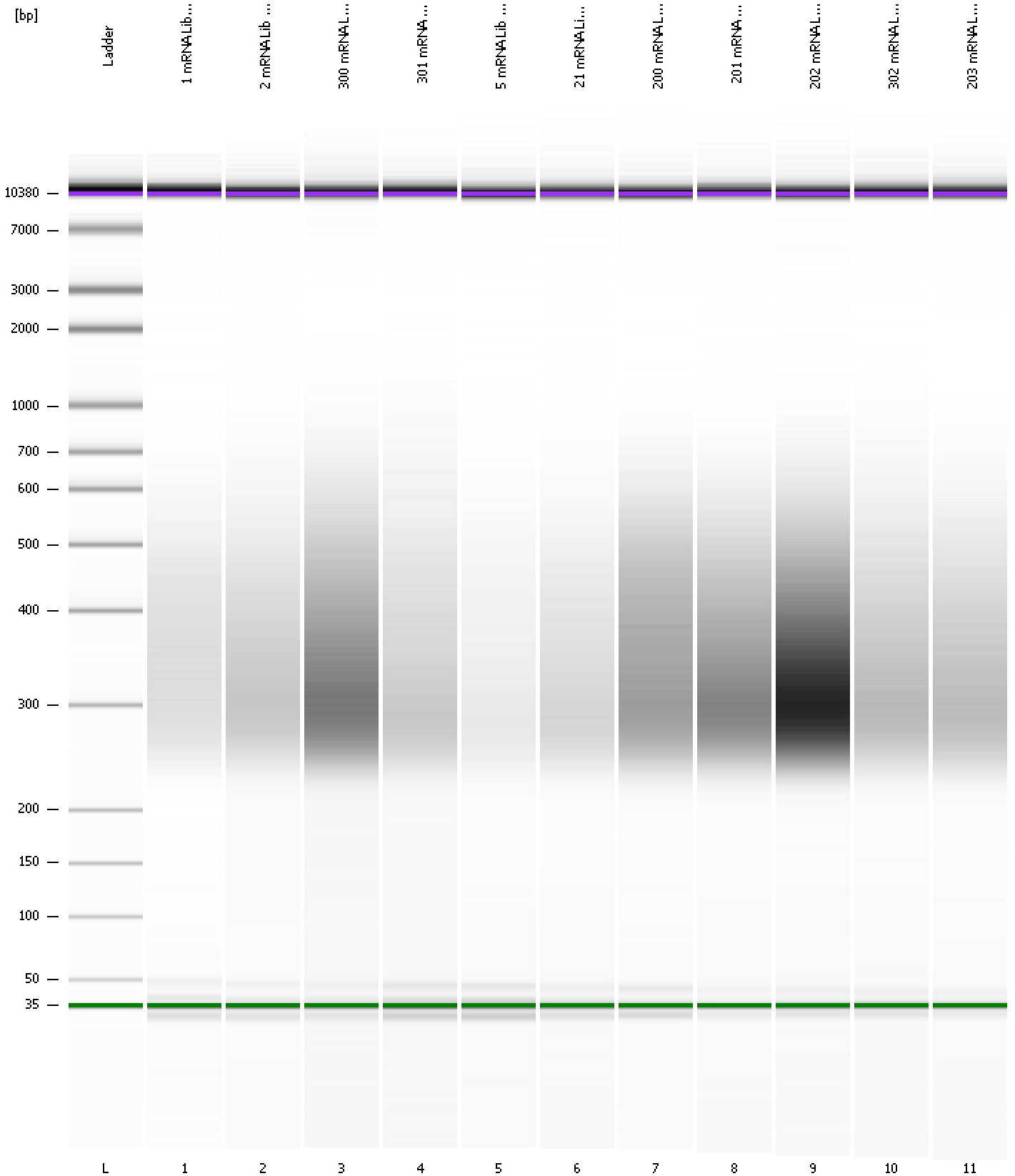
Region table for sample 11 : 203 mRNA Lib (O'Neil)

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
219	567	350	3,180.7	689.52	467.6	93	22.0	Blue

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad

Created: 1/8/2013 2:42:19 PM
Modified: 1/8/2013 3:50:12 PM

Gel Image



Assay Class: High Sensitivity DNA Assay Created: 1/8/2013 2:42:19 PM
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad Modified: 1/8/2013 3:50:12 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		1/8/2013 3:23:37 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2013-01-08\2013-01-08_002.xad)		Instrument	Run		1/8/2013 2:42:24 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		1/8/2013 2:42:24 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		1/8/2013 2:42:24 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		1/8/2013 2:42:24 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		1/8/2013 2:42:24 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		1/8/2013 2:42:24 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		1/8/2013 2:42:24 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1