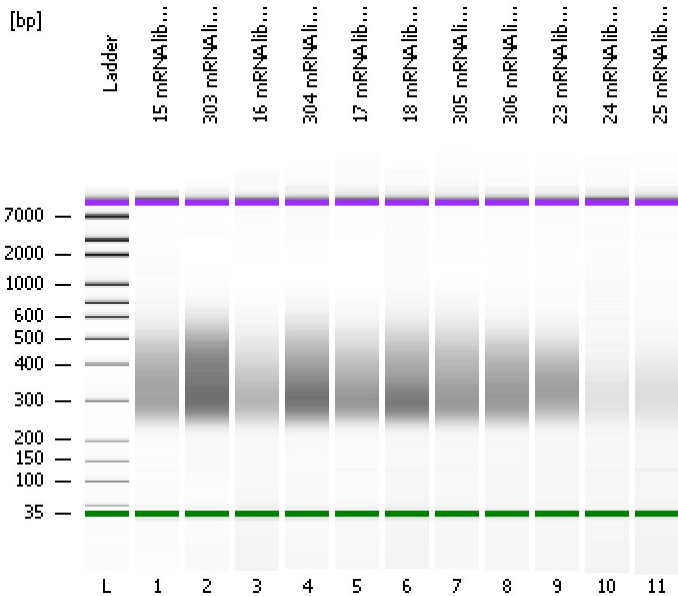


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
Modified: 1/10/2013 4:07:57 PM

**Electrophoresis File Run Summary**



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

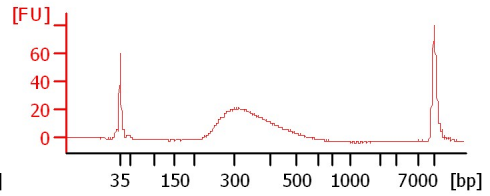
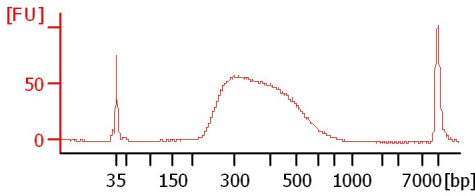
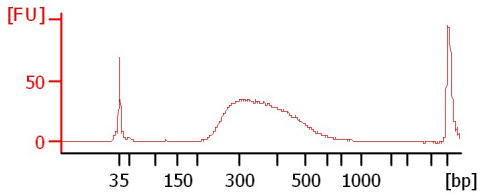
**Assay Information:**  
 Assay Origin Path: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\assays\dsDNA\High Sensitivity DNA.xsy  
 Assay Class: High Sensitivity DNA Assay  
 Version: 1.03  
 Assay Comments: Copyright © 2003-2010 Agilent Technologies

**Chip Information:**  
 Chip Lot #:   
 Reagent Kit Lot #:   
 Chip Comments:

15 mRNA lib (O'Neil)

303 mRNA lib (O'Neil)

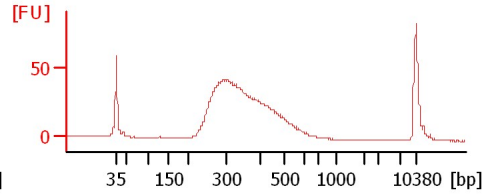
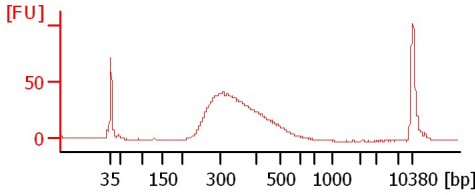
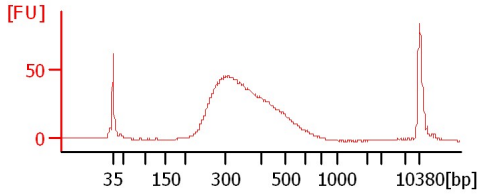
16 mRNA lib (O'Neil)



304 mRNA lib (O'Neil)

17 mRNA lib (O'Neil)

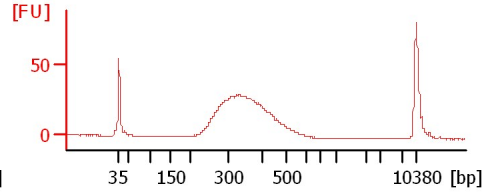
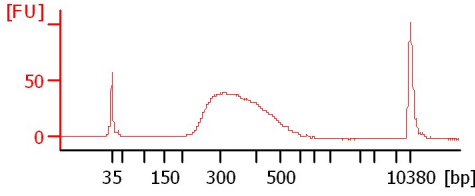
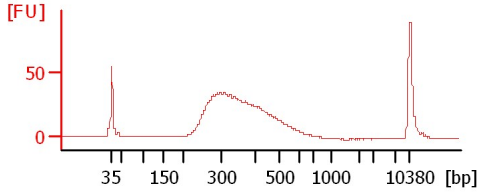
18 mRNA lib (O'Neil)



305 mRNA lib (O'Neil)

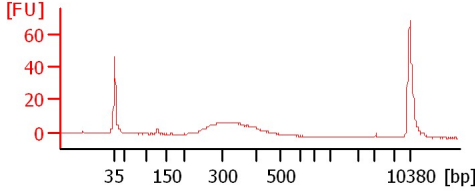
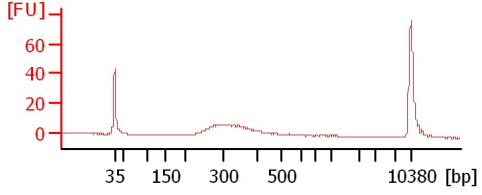
306 mRNA lib (O'Neil)

23 mRNA lib (O'Neil)



24 mRNA lib (O'Neil)

25 mRNA lib (O'Neil)



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 PM

**Electrophoresis File Run Summary (Chip Summary)**

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
15 mRNA lib (O'Neil)		<input type="checkbox"/>	✓			
303 mRNA lib (O'Neil)		<input type="checkbox"/>	✓			
16 mRNA lib (O'Neil)		<input type="checkbox"/>	✓			
304 mRNA lib (O'Neil)		<input type="checkbox"/>	✓			
17 mRNA lib (O'Neil)		<input type="checkbox"/>	✓			
18 mRNA lib (O'Neil)		<input type="checkbox"/>	✓			
305 mRNA lib (O'Neil)		<input type="checkbox"/>	✓			
306 mRNA lib (O'Neil)		<input type="checkbox"/>	✓			
23 mRNA lib (O'Neil)		<input type="checkbox"/>	✓			
24 mRNA lib (O'Neil)		<input type="checkbox"/>	✓			
25 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\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
Modified: 1/10/2013 4:07:57 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

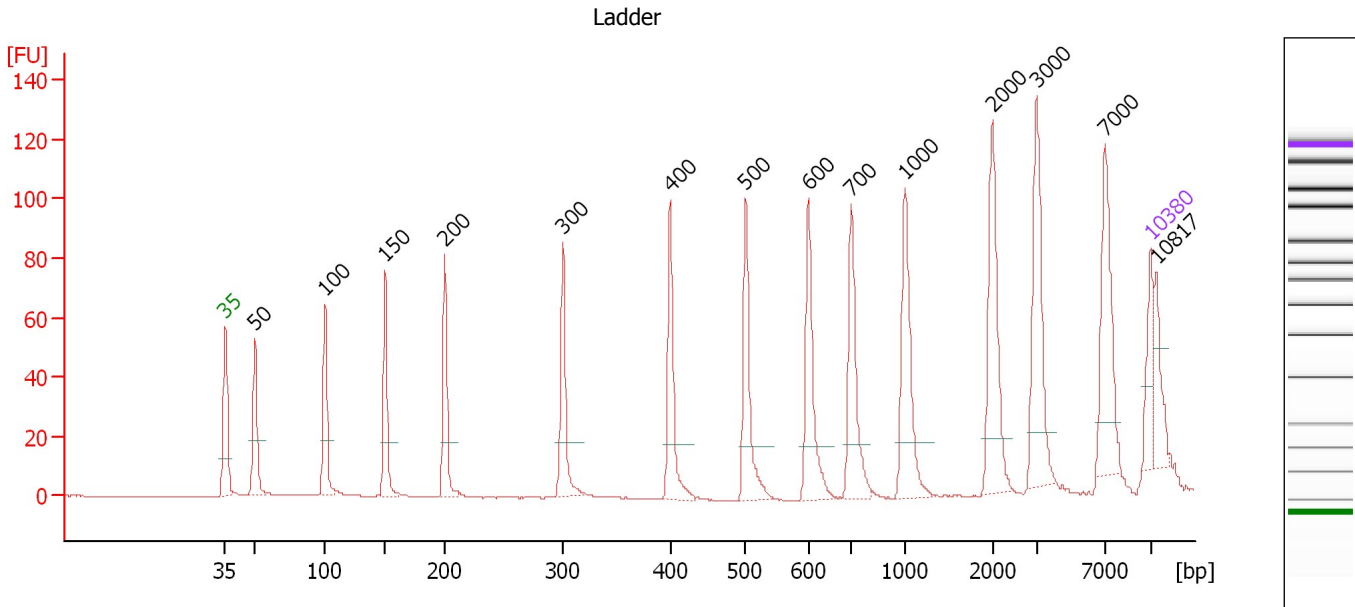
**Ladder**

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\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

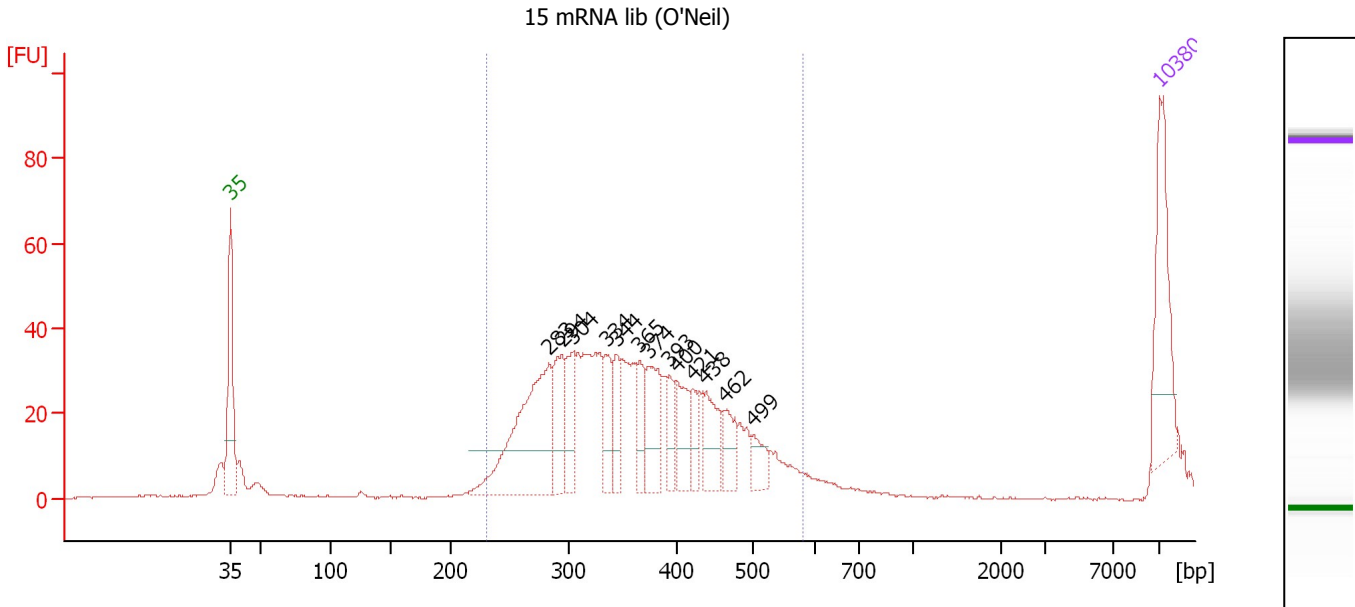
**Peak table for Ladder**

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
16	10,817	0.00	0.0	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 PM

**Electropherogram Summary Continued ...**



**Setpoint Deviations for sample 1 : 15 mRNA lib (O'Neil)**

Height Threshold [FU] : 10

**Overall Results for sample 1 : 15 mRNA lib (O'Neil)**

Number of peaks found: 13                      Corr. Area 1: 722.9  
 Noise: 0.1

**Peak table for sample 1 : 15 mRNA lib (O'Neil)**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	283	203.53	1,091.1	
3	294	66.33	342.0	
4	304	53.02	264.5	
5	334	42.88	194.6	
6	344	36.84	162.3	
7	365	35.03	145.4	
8	374	62.20	251.9	
9	393	23.98	92.5	
10	400	43.43	164.6	
11	421	28.20	101.5	
12	438	44.92	155.5	
13	462	31.61	103.6	
14	499	22.76	69.0	
15	10,380	75.00	10.9	Upper Marker

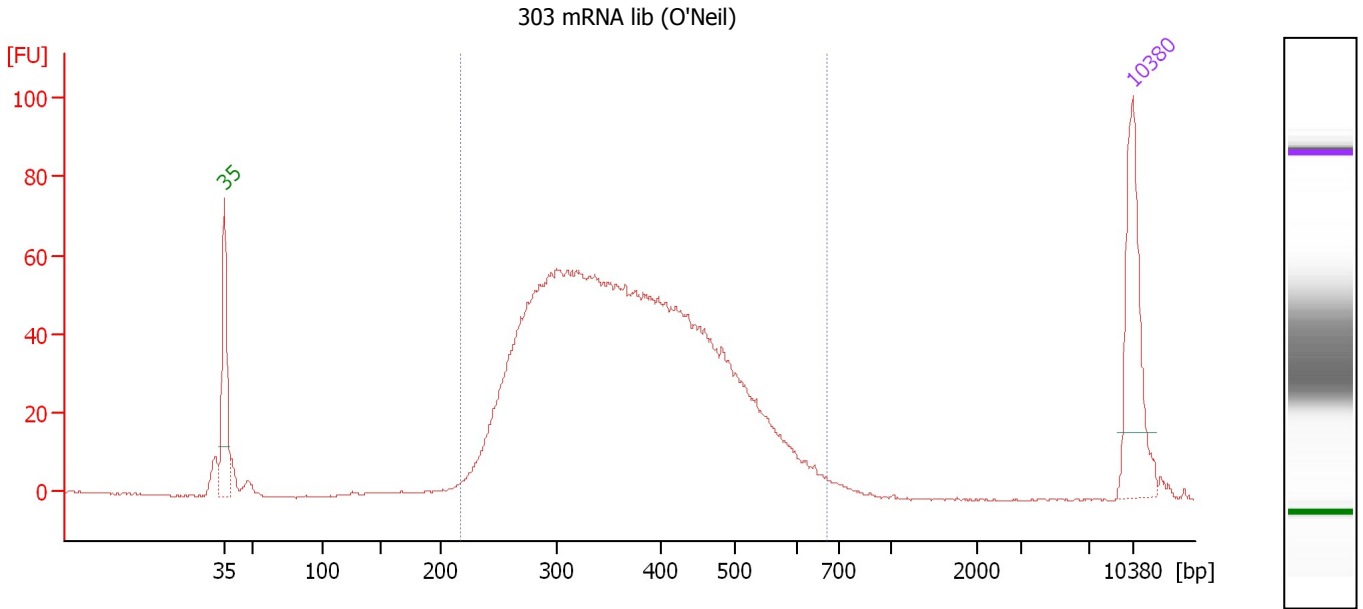
**Region table for sample 1 : 15 mRNA lib (O'Neil)**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
230	580	359	4,203.1	940.07	722.9	94	20.6	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 PM

**Electropherogram Summary Continued ...**



**Setpoint Deviations for sample 2 : 303 mRNA lib (O'Neil)**

Height Threshold [FU] : 15

**Overall Results for sample 2 : 303 mRNA lib (O'Neil)**

Number of peaks found: 0                      Corr. Area 1: 1,469.0  
 Noise: 0.2

**Peak table for sample 2 : 303 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

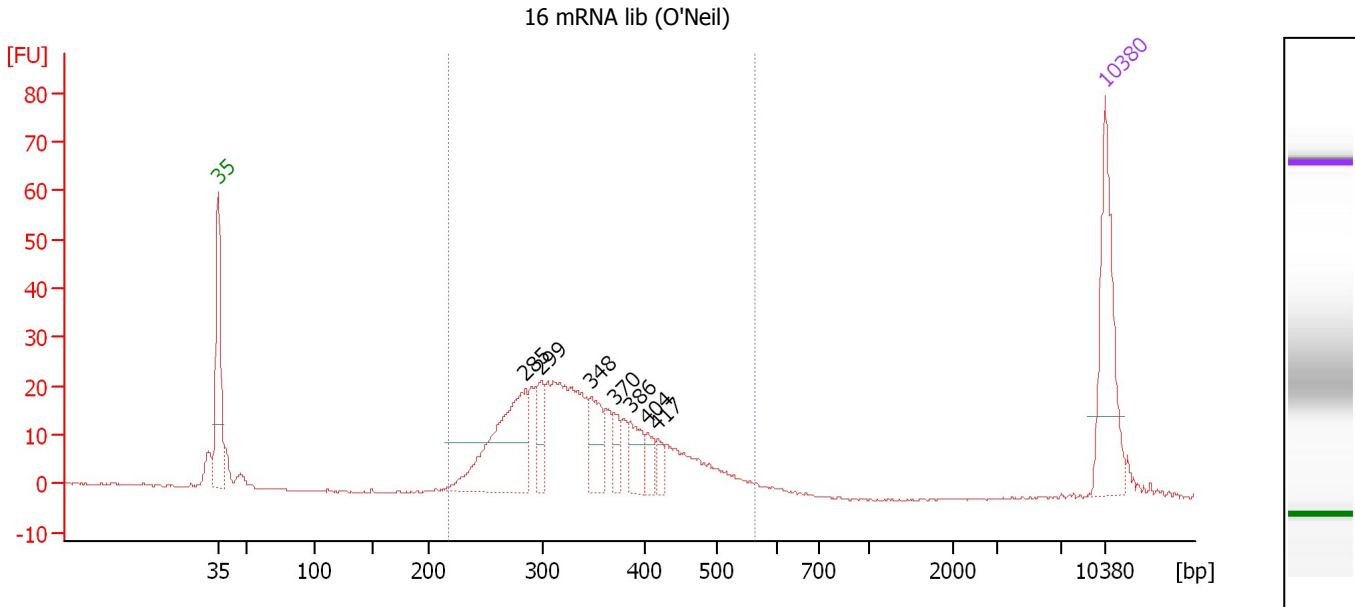
**Region table for sample 2 : 303 mRNA lib (O'Neil)**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
218	673	377	6,148.2	1,411.05	1,469.0	97	24.1	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 PM

**Electropherogram Summary Continued ...**



**Setpoint Deviations for sample 3 : 16 mRNA lib (O'Neil)**

Height Threshold [FU] : 10

**Overall Results for sample 3 : 16 mRNA lib (O'Neil)**

Number of peaks found: 7                      Corr. Area 1: 414.8  
 Noise: 0.2

**Peak table for sample 3 : 16 mRNA lib (O'Neil)**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	285	149.86	795.3	
3	299	34.80	176.5	
4	348	40.79	177.4	
5	370	19.77	80.9	
6	386	32.14	126.2	
7	404	17.00	63.7	
8	417	11.51	41.8	
9	10,380	75.00	10.9	Upper Marker

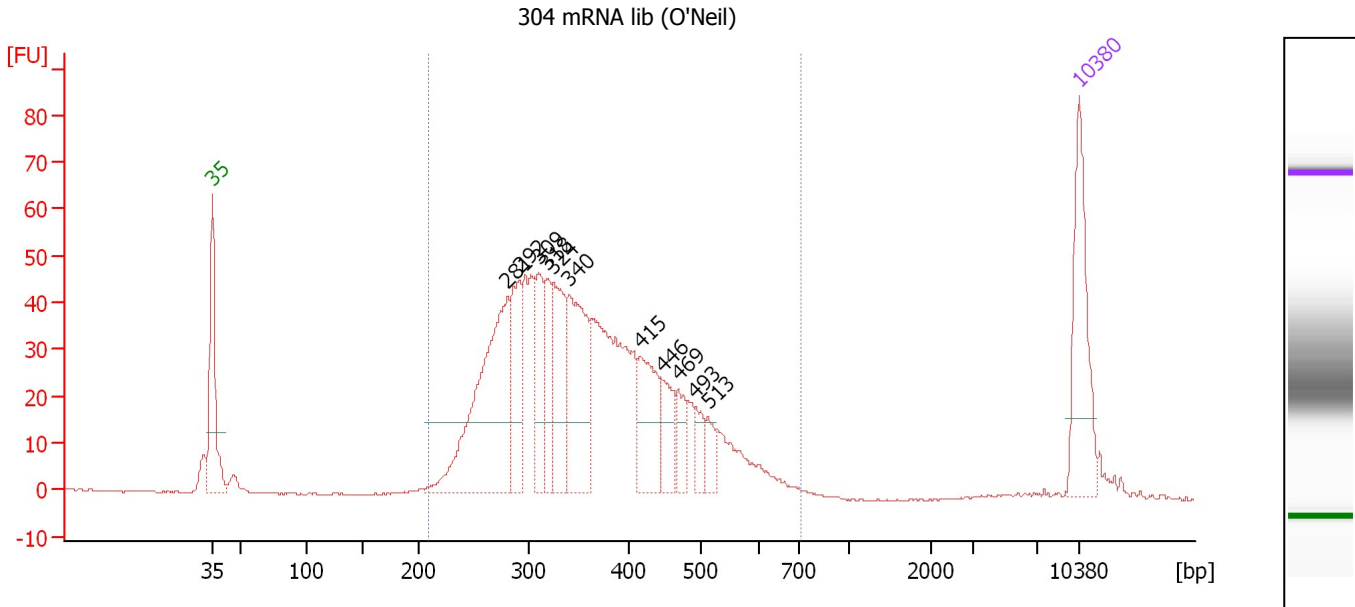
**Region table for sample 3 : 16 mRNA lib (O'Neil)**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
217	563	345	2,597.2	561.16	414.8	93	19.8	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 PM

**Electropherogram Summary Continued ...**



**Setpoint Deviations for sample 4 : 304 mRNA lib (O'Neil)**

Height Threshold [FU] : 15

**Overall Results for sample 4 : 304 mRNA lib (O'Neil)**

Number of peaks found: 11                      Corr. Area 1: 1,034.9  
 Noise: 0.1

**Peak table for sample 4 : 304 mRNA lib (O'Neil)**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	281	253.12	1,366.9	
3	292	87.10	452.5	
4	309	64.63	316.5	
5	318	47.39	225.5	
6	324	96.61	451.4	
7	340	130.51	581.2	
8	415	75.08	273.9	
9	446	38.30	130.1	
10	469	25.06	81.0	
11	493	20.14	61.8	
12	513	18.94	55.9	
13	10,380	75.00	10.9	Upper Marker

**Region table for sample 4 : 304 mRNA lib (O'Neil)**

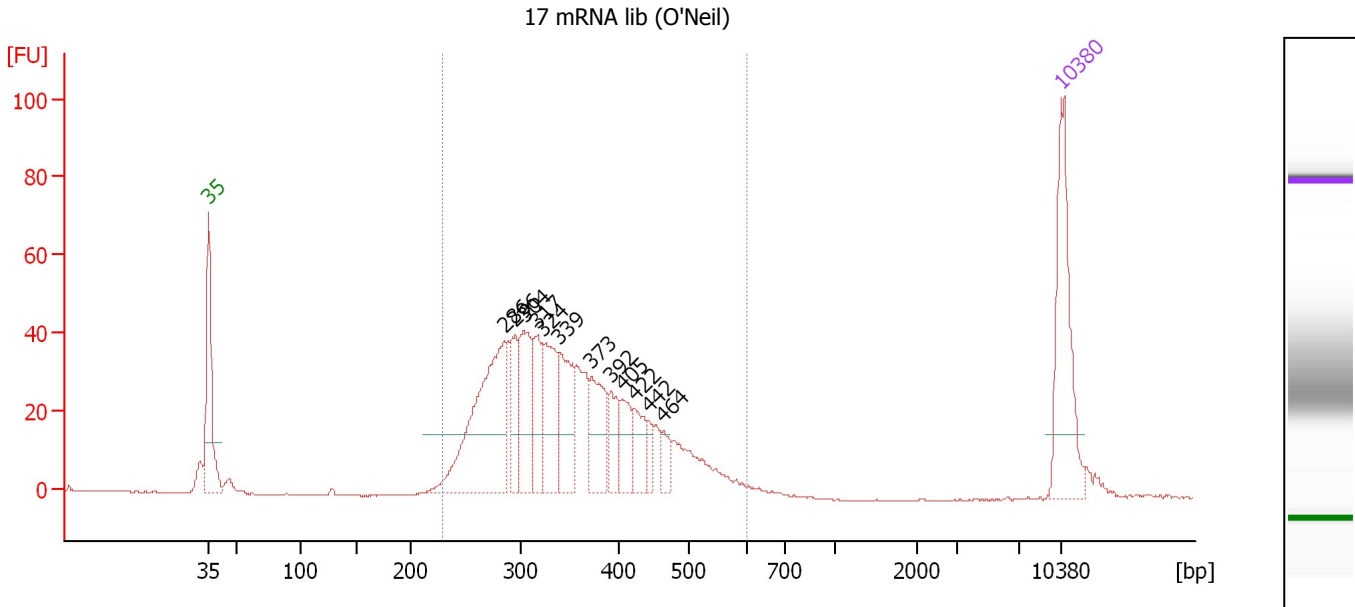
From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
210	715	365	5,619.0	1,253.40	1,034.9	97	24.4	Blue



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 PM

**Electropherogram Summary Continued ...**



**Setpoint Deviations for sample 5 : 17 mRNA lib (O'Neil)**

Height Threshold [FU] : 15

**Overall Results for sample 5 : 17 mRNA lib (O'Neil)**

Number of peaks found: 12      Corr. Area 1: 811.3  
 Noise: 0.1

**Peak table for sample 5 : 17 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	183.88	973.9	
3	296	41.02	210.1	
4	304	71.15	354.5	
5	317	46.45	221.9	
6	324	69.63	326.1	
7	339	67.55	301.7	
8	373	55.91	227.3	
9	392	25.91	100.1	
10	405	29.81	111.5	
11	422	25.66	92.2	
12	442	12.23	41.9	
13	464	14.30	46.7	
14	10,380	75.00	10.9	Upper Marker

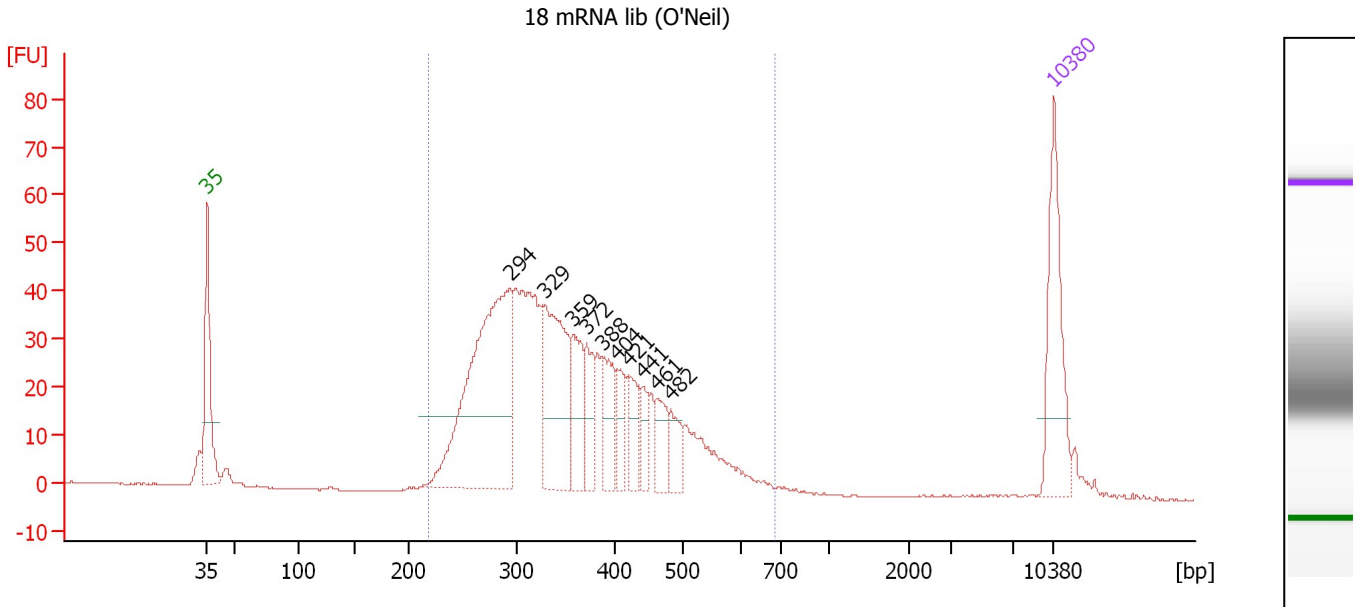
**Region table for sample 5 : 17 mRNA lib (O'Neil)**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
228	601	353	3,592.5	789.68	811.3	96	21.3	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 PM

**Electropherogram Summary Continued ...**



**Setpoint Deviations for sample 6 : 18 mRNA lib (O'Neil)**

Height Threshold [FU] : 15

**Overall Results for sample 6 : 18 mRNA lib (O'Neil)**

Number of peaks found: 10                      Corr. Area 1: 894.2  
 Noise: 0.2

**Peak table for sample 6 : 18 mRNA lib (O'Neil)**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	294	340.89	1,754.5	
3	329	151.97	700.7	
4	359	61.41	259.5	
5	372	44.29	180.4	
6	388	49.06	191.4	
7	404	28.42	106.5	
8	421	35.64	128.4	
9	441	21.98	75.5	
10	461	31.41	103.4	
11	482	26.88	84.5	
12	10,380	75.00	10.9	Upper Marker

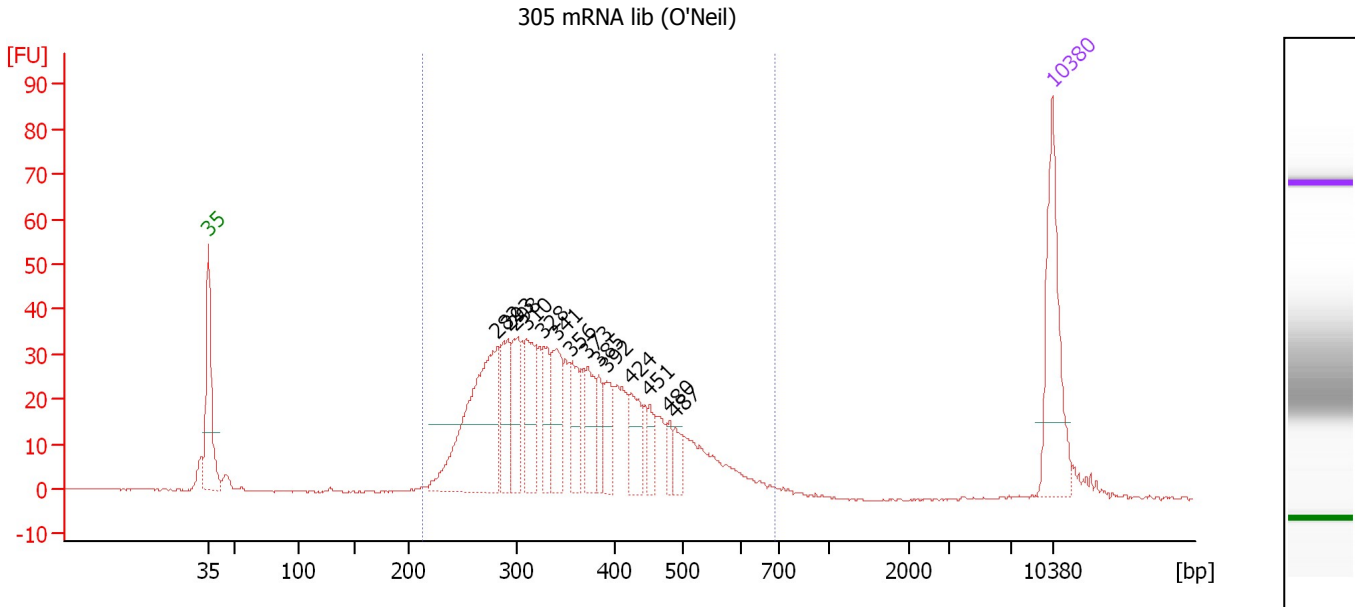
**Region table for sample 6 : 18 mRNA lib (O'Neil)**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
219	684	361	5,197.6	1,149.69	894.2	96	24.0	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 PM

**Electropherogram Summary Continued ...**



**Setpoint Deviations for sample 7 : 305 mRNA lib (O'Neil)**

Height Threshold [FU] : 15

**Overall Results for sample 7 : 305 mRNA lib (O'Neil)**

Number of peaks found: 14      Corr. Area 1: 775.5  
 Noise: 0.1

**Peak table for sample 7 : 305 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	198.46	1,064.9	
3	293	60.92	315.3	
4	298	55.35	281.2	
5	310	61.31	299.6	
6	328	38.41	177.7	
7	341	57.78	256.6	
8	356	40.18	170.8	
9	373	38.57	156.8	
10	385	23.11	91.0	
11	392	28.78	111.1	
12	424	33.91	121.2	
13	451	18.10	60.8	
14	480	12.98	41.0	
15	487	15.22	47.3	
16	10,380	75.00	10.9	Upper Marker

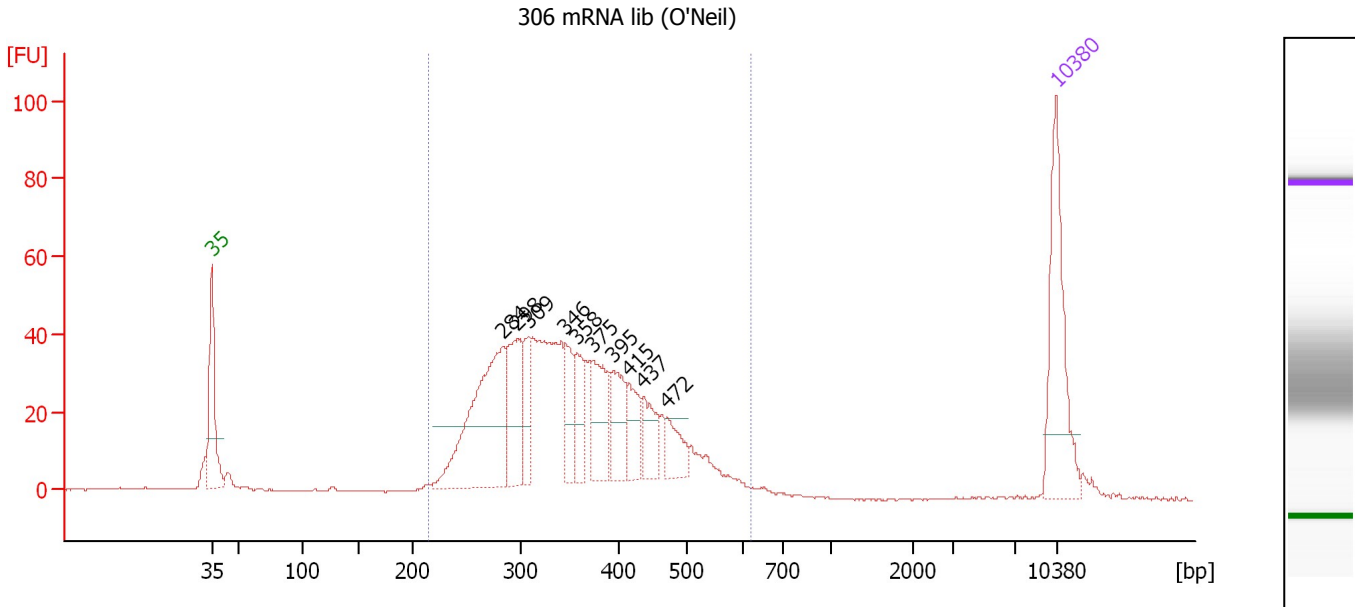
**Region table for sample 7 : 305 mRNA lib (O'Neil)**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
213	686	365	4,216.4	940.98	775.5	96	24.3	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 PM

**Electropherogram Summary Continued ...**



**Setpoint Deviations for sample 8 : 306 mRNA lib (O'Neil)**

Height Threshold [FU] : 15

**Overall Results for sample 8 : 306 mRNA lib (O'Neil)**

Number of peaks found: 10                      Corr. Area 1: 902.2  
 Noise: 0.2

**Peak table for sample 8 : 306 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	178.00	948.4	
3	298	73.33	373.2	
4	309	38.86	190.6	
5	346	36.61	160.3	
6	358	33.49	141.7	
7	375	55.42	224.0	
8	395	42.68	163.7	
9	415	30.55	111.4	
10	437	29.95	103.8	
11	472	25.42	81.6	
12	10,380	75.00	10.9	Upper Marker

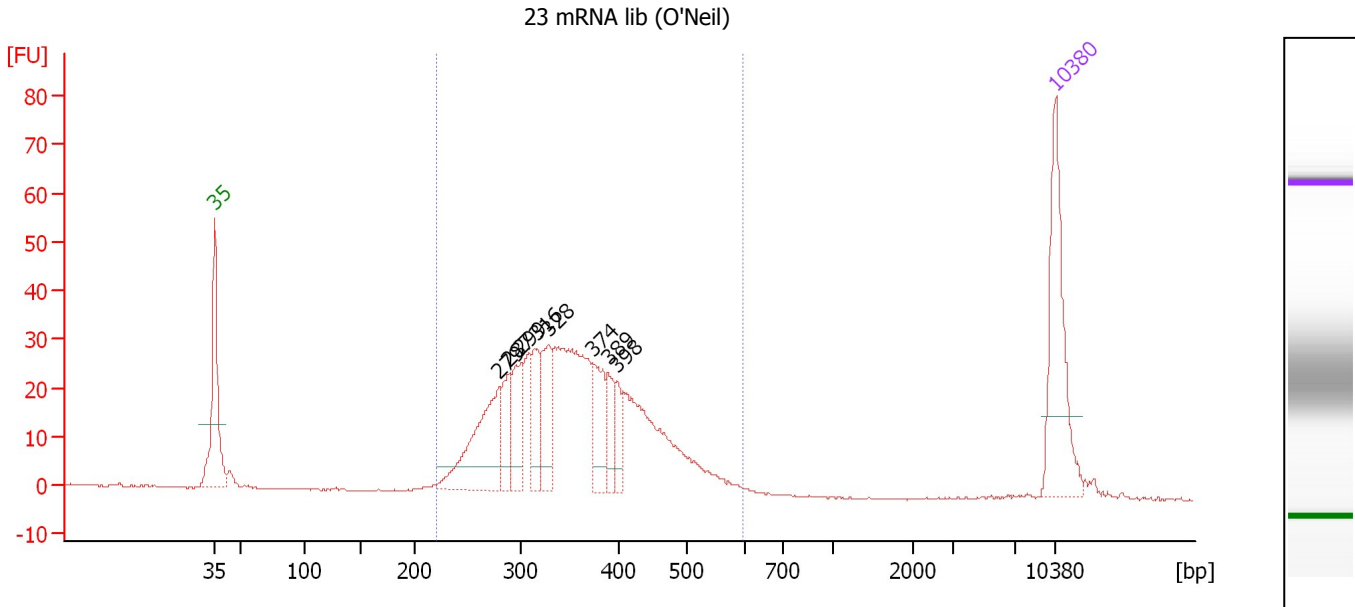
**Region table for sample 8 : 306 mRNA lib (O'Neil)**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
215	620	358	3,841.2	851.18	902.2	94	22.0	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : 23 mRNA lib (O'Neil)**

Number of peaks found: 8                      Corr. Area 1: 591.8  
 Noise: 0.2

**Peak table for sample 9 : 23 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	105.44	571.8	
3	287	35.39	186.6	
4	299	46.90	237.4	
5	316	41.59	199.6	
6	328	50.27	232.4	
7	374	45.94	186.3	
8	389	25.55	99.5	
9	398	21.66	82.5	
10	10,380	75.00	10.9	Upper Marker

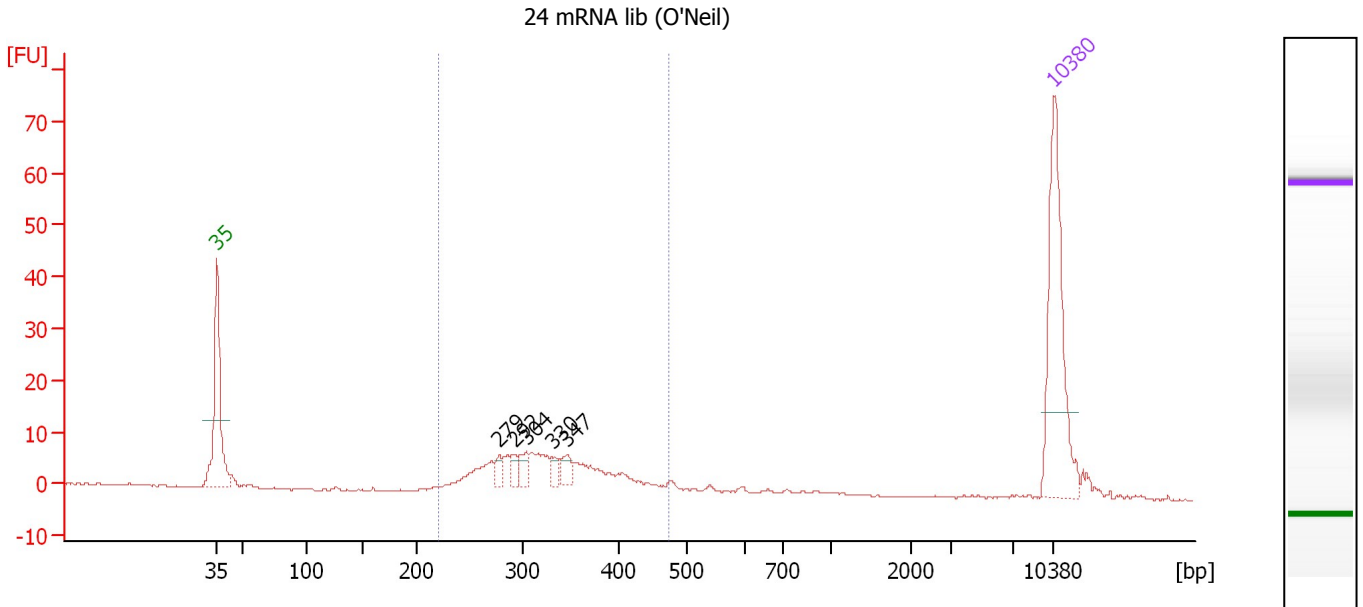
**Region table for sample 9 : 23 mRNA lib (O'Neil)**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
221	598	357	3,139.5	702.78	591.8	97	19.9	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : 24 mRNA lib (O'Neil)**

Number of peaks found: 5                      Corr. Area 1: 121.7  
 Noise: 0.1

**Peak table for sample 10 : 24 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	6.50	35.3	
3	292	7.39	38.3	
4	304	9.93	49.5	
5	330	6.05	27.7	
6	347	8.69	38.0	
7	10,380	75.00	10.9	Upper Marker

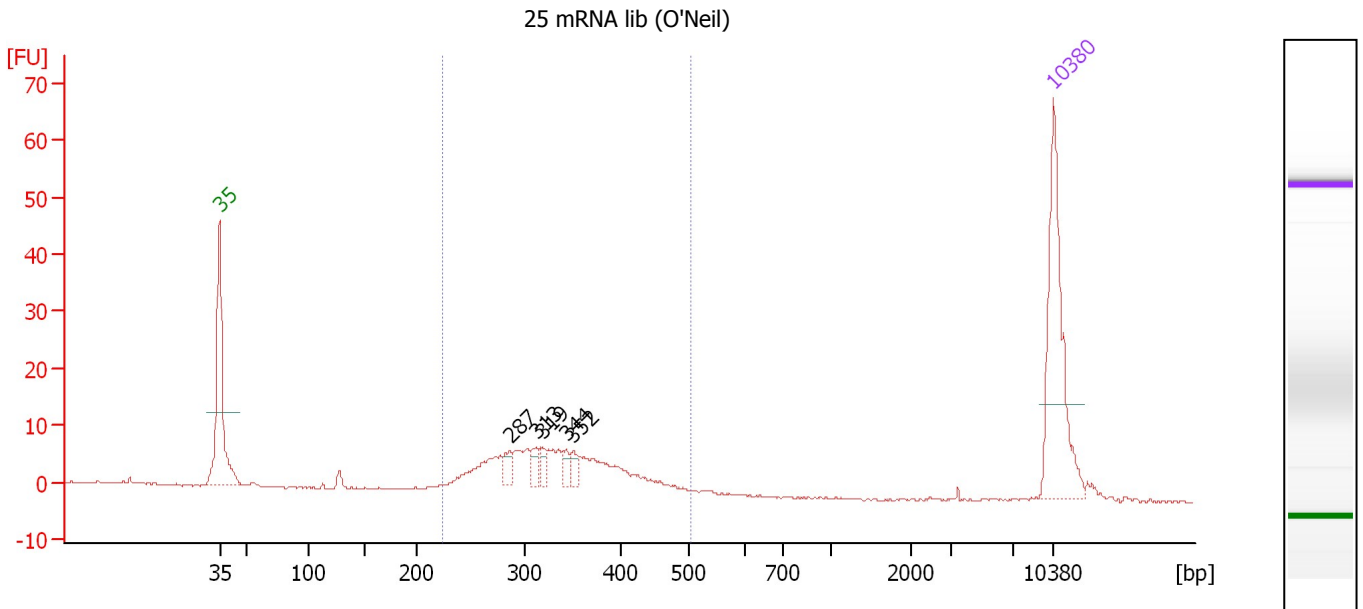
**Region table for sample 10 : 24 mRNA lib (O'Neil)**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
222	472	328	724.1	151.53	121.7	80	16.3	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : 25 mRNA lib (O'Neil)**

Number of peaks found: 5                      Corr. Area 1: 133.7  
 Noise: 0.1

**Peak table for sample 11 : 25 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	9.86	52.0	
3	313	9.50	46.0	
4	319	8.11	38.5	
5	344	7.10	31.3	
6	352	7.18	30.9	
7	10,380	75.00	10.9	Upper Marker

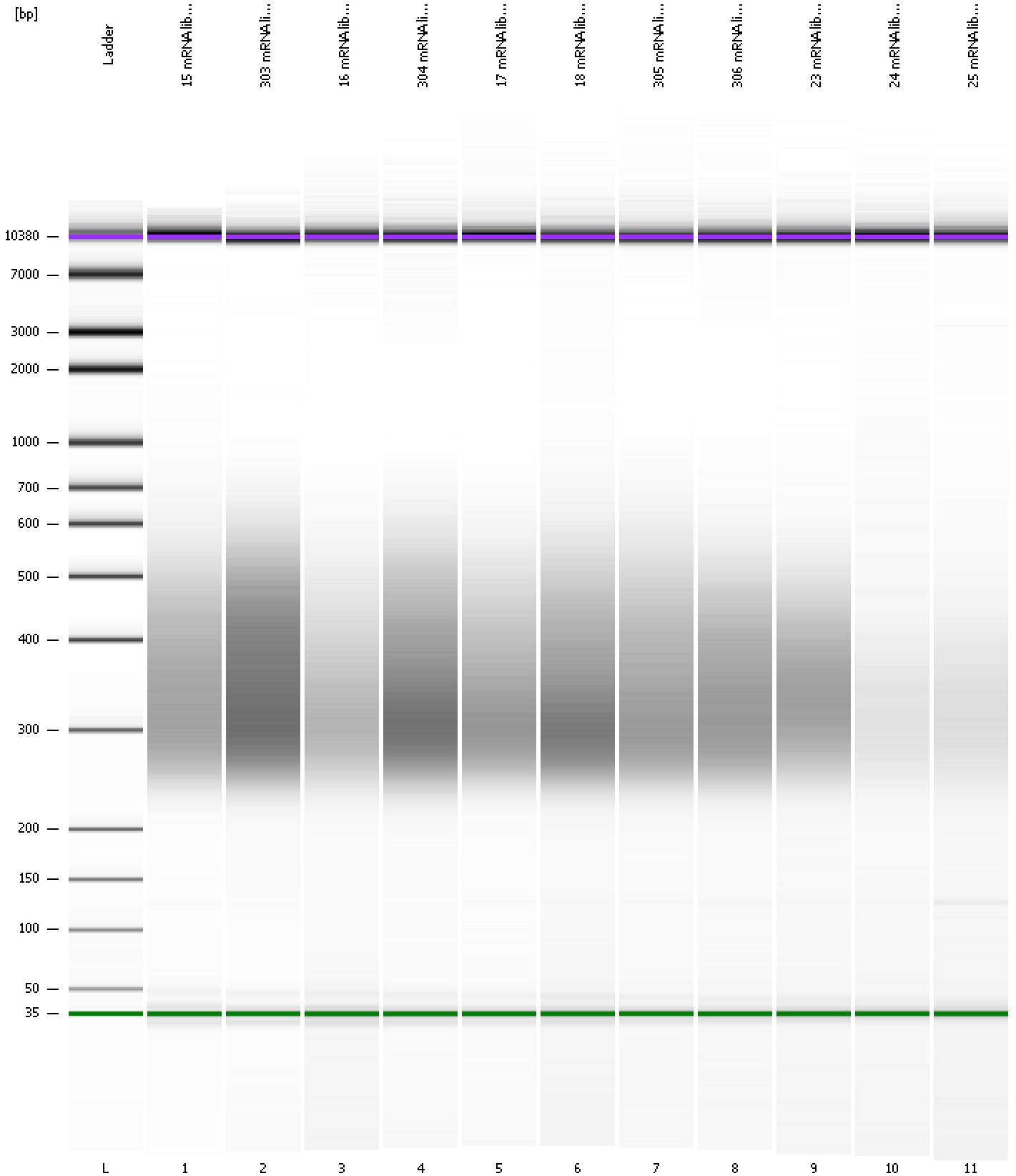
**Region table for sample 11 : 25 mRNA lib (O'Neil)**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
223	504	334	906.9	192.20	133.7	91	17.3	Blue

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
Modified: 1/10/2013 4:07:57 PM

**Gel Image**





Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-10\2013-01-10\_001.xad

Created: 1/10/2013 1:54:37 PM  
 Modified: 1/10/2013 4:07:57 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		1/10/2013 2:35:56 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2013-01-10\2013-01-10_001.xad)		Instrument	Run		1/10/2013 1:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		1/10/2013 1:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		1/10/2013 1:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		1/10/2013 1:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		1/10/2013 1:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		1/10/2013 1:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		1/10/2013 1:54:43 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1