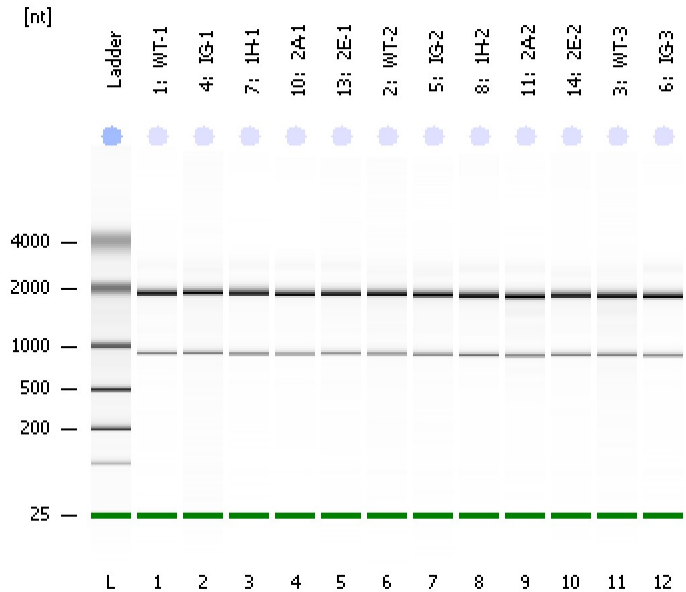


Assay Class: Eukaryote Total RNA Nano
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
 Modified: 1/5/2016 1:58:55 PM

Electrophoresis File Run Summary



Instrument Information:

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

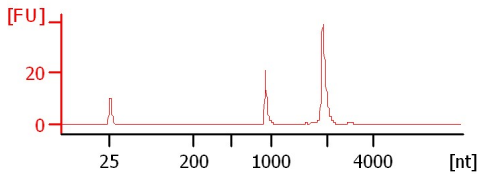
Assay Information:

Assay Origin Path: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\assays\RNA\Eukaryote Total RNA Nano Series II.xsy
 Assay Class: Eukaryote Total RNA Nano
 Version: 2.6
 Assay Comments: Total RNA Analysis ng sensitivity (Eukaryote)
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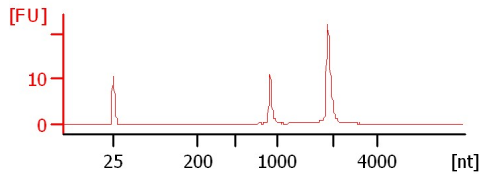
Chip Information:

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

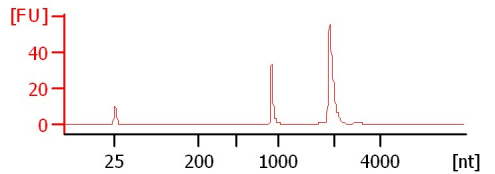
1: WT-1
 Knoepler/Bush Total RNA QC
 RIN:10



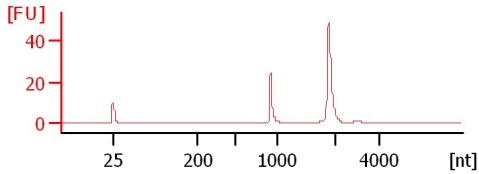
4: IG-1
 Knoepler/Bush Total RNA QC
 RIN: 9.60



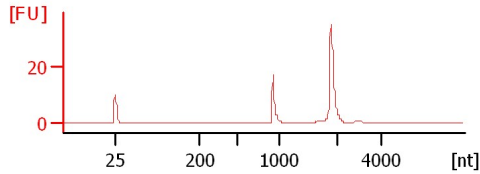
7: 1H-1
 Knoepler/Bush Total RNA QC
 RIN:10



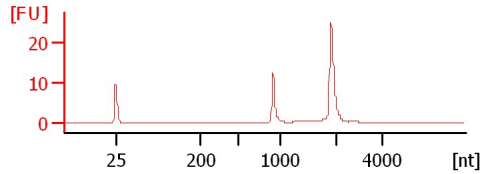
10: 2A-1
 Knoepler/Bush Total RNA QC
 RIN:10



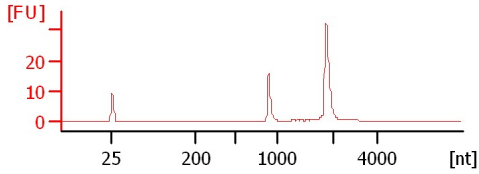
13: 2E-1
 Knoepler/Bush Total RNA QC
 RIN: 9.90



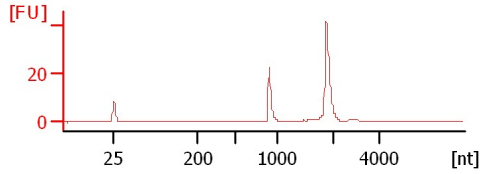
2: WT-2
 Knoepler/Bush Total RNA QC
 RIN: 9.70



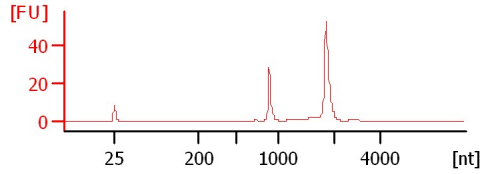
5: IG-2
 Knoepler/Bush Total RNA QC
 RIN: 9.80



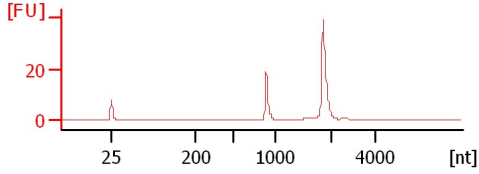
8: 1H-2
 Knoepler/Bush Total RNA QC
 RIN:10



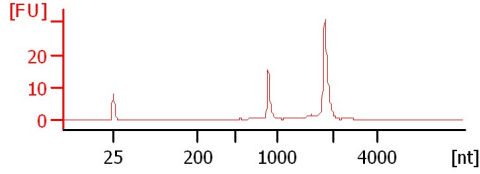
11: 2A-2
 Knoepler/Bush Total RNA QC
 RIN: 9.80



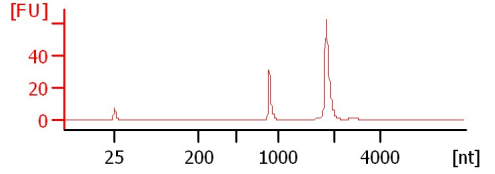
14: 2E-2
 Knoepler/Bush Total RNA QC
 RIN: 9.90



3: WT-3
 Knoepler/Bush Total RNA QC
 RIN: 9.40



6: IG-3
 Knoepler/Bush Total RNA QC
 RIN: 9.90



Assay Class: Eukaryote Total RNA Nano
Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
Modified: 1/5/2016 1:58:55 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Status	Result Label	Result Color
1: WT-1	Knoepler/Bush Total RNA QC	✓	RIN:10	
4: IG-1	Knoepler/Bush Total RNA QC	✓	RIN: 9.60	
7: 1H-1	Knoepler/Bush Total RNA QC	✓	RIN:10	
10: 2A-1	Knoepler/Bush Total RNA QC	✓	RIN:10	
13: 2E-1	Knoepler/Bush Total RNA QC	✓	RIN: 9.90	
2: WT-2	Knoepler/Bush Total RNA QC	✓	RIN: 9.70	
5: IG-2	Knoepler/Bush Total RNA QC	✓	RIN: 9.80	
8: 1H-2	Knoepler/Bush Total RNA QC	✓	RIN:10	
11: 2A-2	Knoepler/Bush Total RNA QC	✓	RIN: 9.80	
14: 2E-2	Knoepler/Bush Total RNA QC	✓	RIN: 9.90	
3: WT-3	Knoepler/Bush Total RNA QC	✓	RIN: 9.40	
6: IG-3	Knoepler/Bush Total RNA QC	✓	RIN: 9.90	
Ladder		✓	All Other Samples	

Chip Lot #

Reagent Kit Lot #

Chip Comments :

Assay Class: Eukaryote Total RNA Nano
Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
Modified: 1/5/2016 1:58:55 PM

Electrophoresis Assay Details

General Analysis Settings

Number of Available Sample and Ladder Wells (Max.) : 13
Minimum Visible Range [s] : 17
Maximum Visible Range [s] : 70
Start Analysis Time Range [s] : 19
End Analysis Time Range [s] : 69
Ladder Concentration [ng/μl] : 150
Lower Marker Concentration [ng/μl] : 0
Upper Marker Concentration [ng/μl] : 0
Used Lower Marker for Quantitation
Standard Curve Fit is Logarithmic
Show Data Aligned to Lower Marker

Integrator Settings

Integration Start Time [s] : 19
Integration End Time [s] : 69
Slope Threshold : 0.6
Height Threshold [FU] : 0.5
Area Threshold : 0.2
Width Threshold [s] : 0.5
Baseline Plateau [s] : 6

Filter Settings

Filter Width [s] : 0.5
Polynomial Order : 4

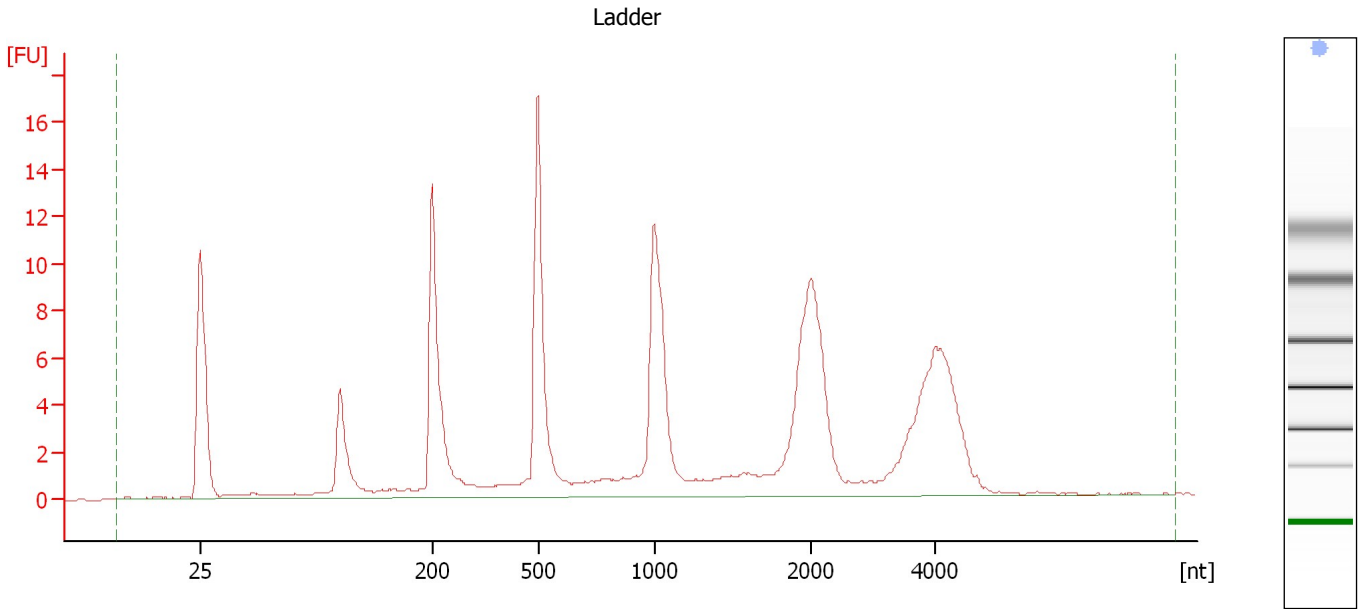
Ladder

Ladder Peak	Size
1	25
2	200
3	500
4	1000
5	2000
6	4000

Assay Class: Eukaryote Total RNA Nano
Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
Modified: 1/5/2016 1:58:55 PM

Electropherogram Summary



Overall Results for Ladder

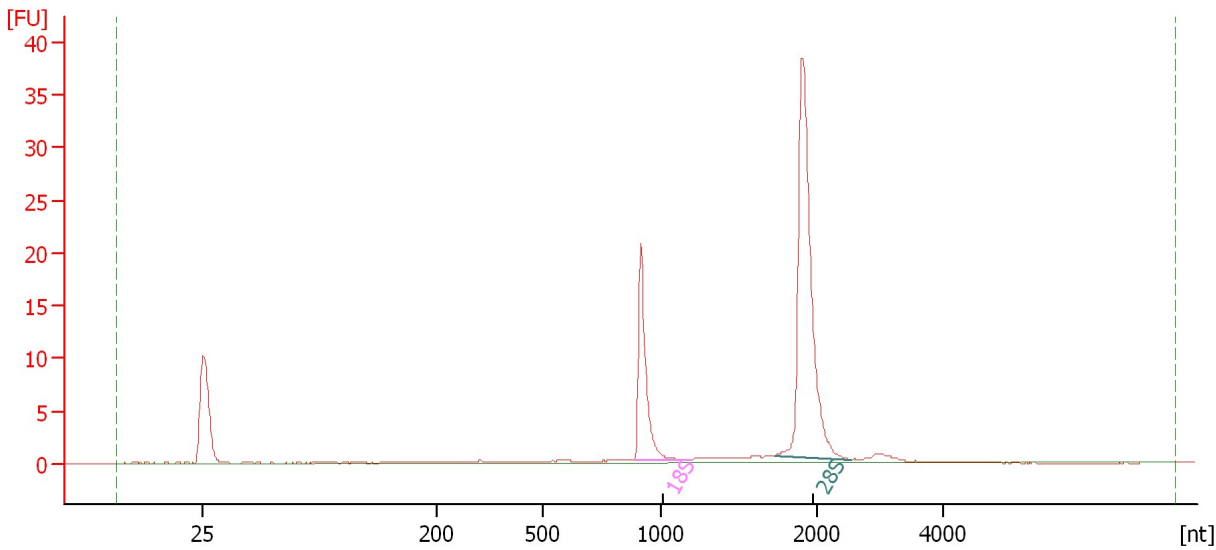
RNA Area:	146.3	Result Flagging Color:	
RNA Concentration:	150 ng/ μ l	Result Flagging Label:	All Other Samples

Assay Class: Eukaryote Total RNA Nano
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
 Modified: 1/5/2016 1:58:55 PM

Electropherogram Summary Continued ...

1: WT-1 [Knoepler/Bush Total RNA QC]



Overall Results for sample 1 : 1: WT-1

RNA Area:	82.6	RNA Integrity Number (RIN):	10 (B.02.08)
RNA Concentration:	85 ng/μl	Result Flagging Color:	
rRNA Ratio [28s / 18s]:	2.7	Result Flagging Label:	RIN:10

Fragment table for sample 1 : 1: WT-1

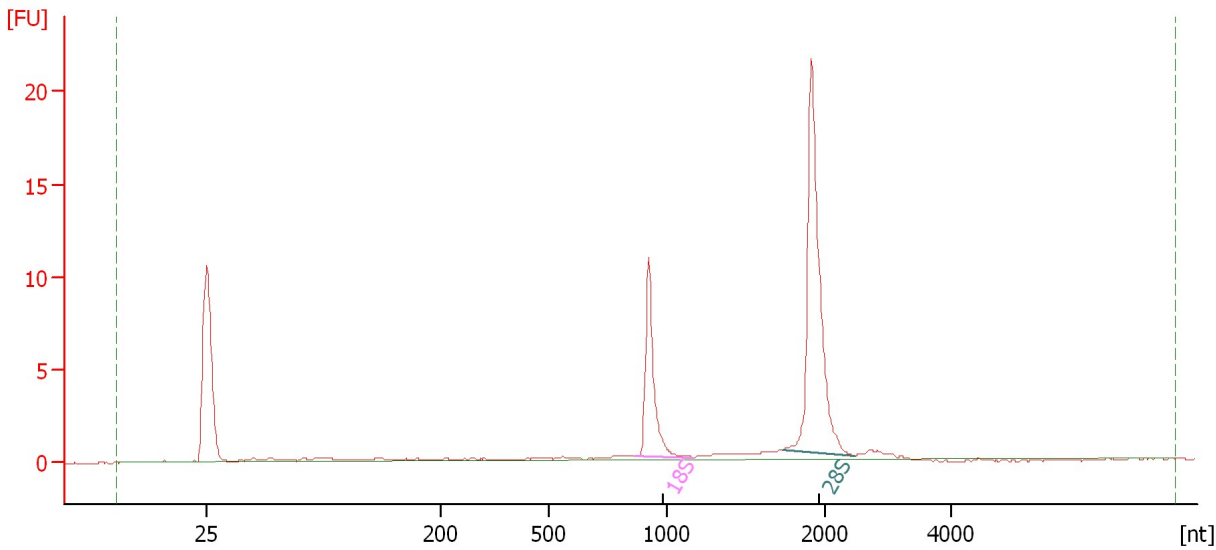
Name	Start Size [nt]	End Size [nt]	Area	% of total Area
18S	887	1,192	18.3	22.1
28S	1,723	2,532	49.3	59.7

Assay Class: Eukaryote Total RNA Nano
Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
Modified: 1/5/2016 1:58:55 PM

Electropherogram Summary Continued ...

4: IG-1 [Knoepler/Bush Total RNA QC]



Overall Results for sample 2 : 4: IG-1

RNA Area: 52.4 RNA Integrity Number (RIN): 9.6 (B.02.08)
RNA Concentration: 54 ng/μl Result Flagging Color:
rRNA Ratio [28s / 18s]: 2.5 Result Flagging Label: RIN: 9.60

Fragment table for sample 2 : 4: IG-1

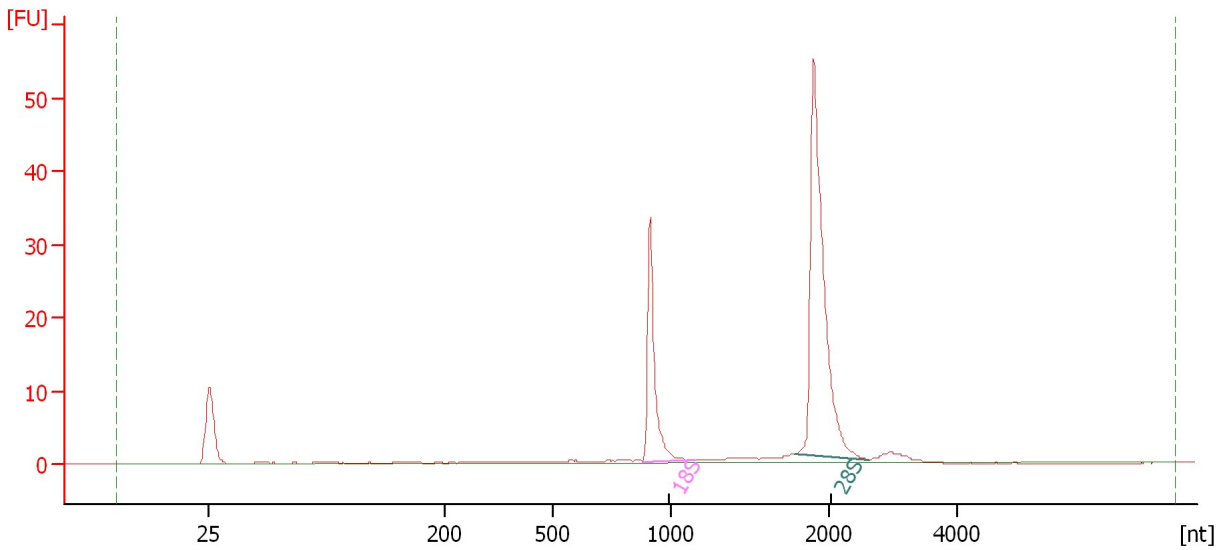
Name	Start Size [nt]	End Size [nt]	Area	% of total Area
18S	866	1,166	10.4	19.8
28S	1,740	2,467	26.3	50.2

Assay Class: Eukaryote Total RNA Nano
Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
Modified: 1/5/2016 1:58:55 PM

Electropherogram Summary Continued ...

7: 1H-1 [Knoepler/Bush Total RNA QC]



Overall Results for sample 3 : 7: 1H-1

RNA Area: 126.4 RNA Integrity Number (RIN): 10 (B.02.08)
RNA Concentration: 130 ng/μl Result Flagging Color:
rRNA Ratio [28s / 18s]: 2.5 Result Flagging Label: RIN:10

Fragment table for sample 3 : 7: 1H-1

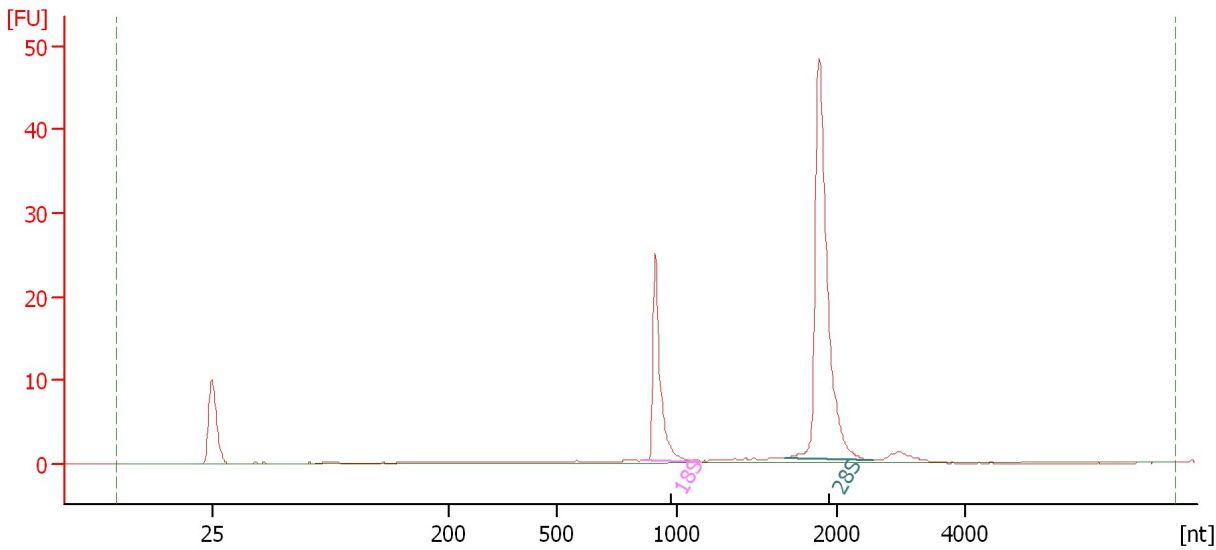
Name	Start Size [nt]	End Size [nt]	Area	% of total Area
18S	886	1,153	29.2	23.1
28S	1,786	2,609	72.8	57.6

Assay Class: Eukaryote Total RNA Nano
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
 Modified: 1/5/2016 1:58:55 PM

Electropherogram Summary Continued ...

10: 2A-1 [Knoepler/Bush Total RNA QC]



Overall Results for sample 4 : 10: 2A-1

RNA Area:	97.6	RNA Integrity Number (RIN):	10 (B.02.08)
RNA Concentration:	100 ng/μl	Result Flagging Color:	
rRNA Ratio [28s / 18s]:	2.7	Result Flagging Label:	RIN:10

Fragment table for sample 4 : 10: 2A-1

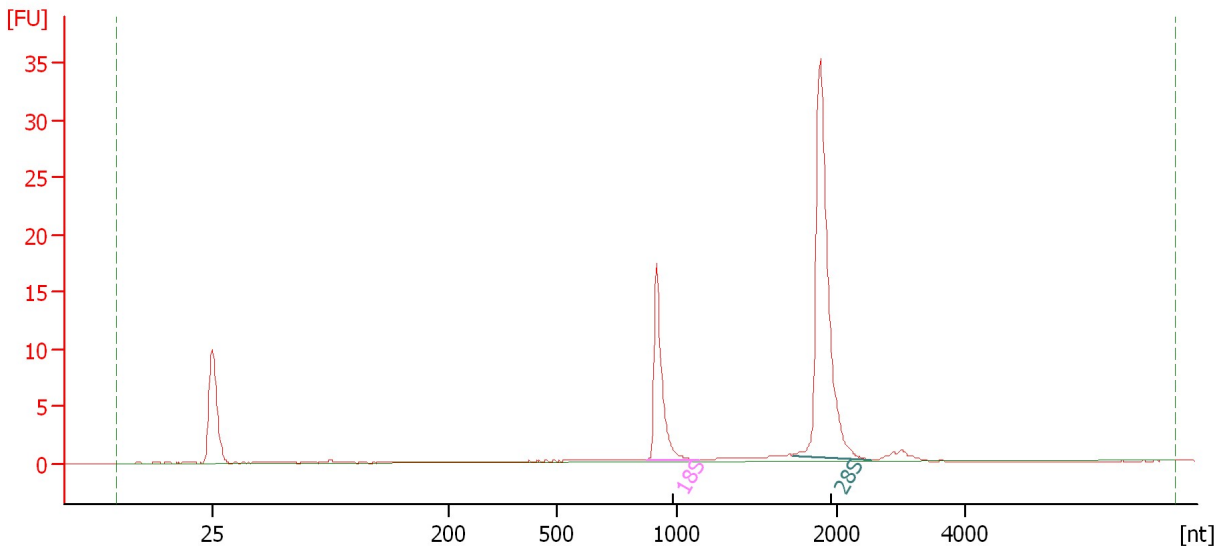
Name	Start Size [nt]	End Size [nt]	Area	% of total Area
18S	856	1,153	22.0	22.5
28S	1,675	2,560	59.2	60.7

Assay Class: Eukaryote Total RNA Nano
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
 Modified: 1/5/2016 1:58:55 PM

Electropherogram Summary Continued ...

13: 2E-1 [Knoepler/Bush Total RNA QC]



Overall Results for sample 5 : 13: 2E-1

RNA Area:	71.4	RNA Integrity Number (RIN):	9.9 (B.02.08, Anomaly Threshold(s) manually adapted)
RNA Concentration:	73 ng/μl	Result Flagging Color:	
rRNA Ratio [28s / 18s]:	2.7	Result Flagging Label:	RIN: 9.90

Fragment table for sample 5 : 13: 2E-1

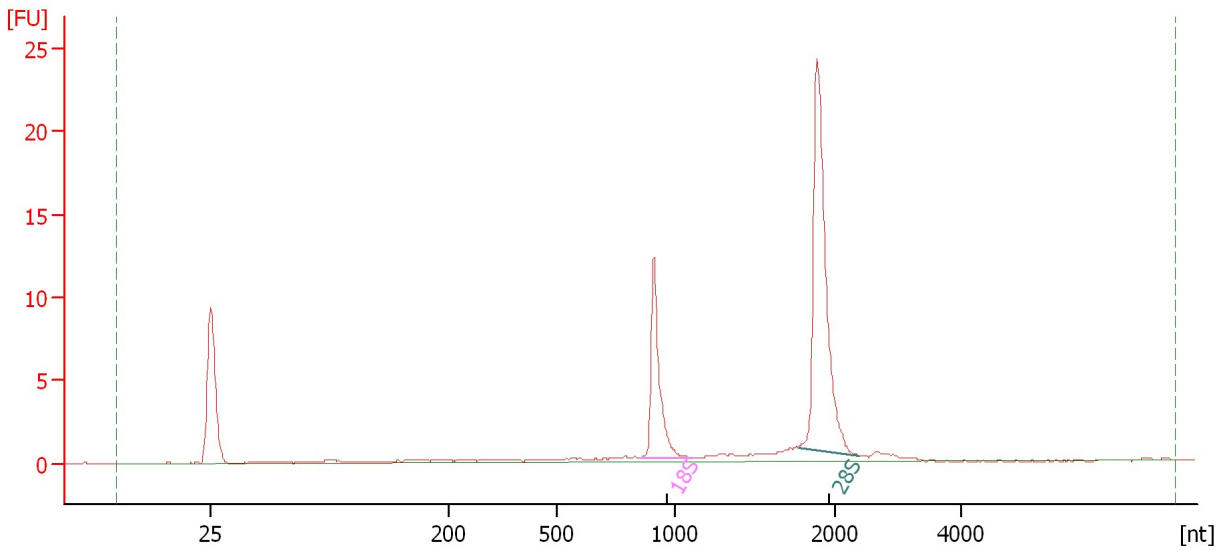
Name	Start Size [nt]	End Size [nt]	Area	% of total Area
18S	874	1,140	15.8	22.1
28S	1,722	2,544	42.2	59.1

Assay Class: Eukaryote Total RNA Nano
Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
Modified: 1/5/2016 1:58:55 PM

Electropherogram Summary Continued ...

2: WT-2 [Knoepler/Bush Total RNA QC]



Overall Results for sample 6 : 2: WT-2

RNA Area: 58.8 RNA Integrity Number (RIN): 9.7 (B.02.08)
RNA Concentration: 60 ng/μl Result Flagging Color:
rRNA Ratio [28s / 18s]: 2.4 Result Flagging Label: RIN: 9.70

Fragment table for sample 6 : 2: WT-2

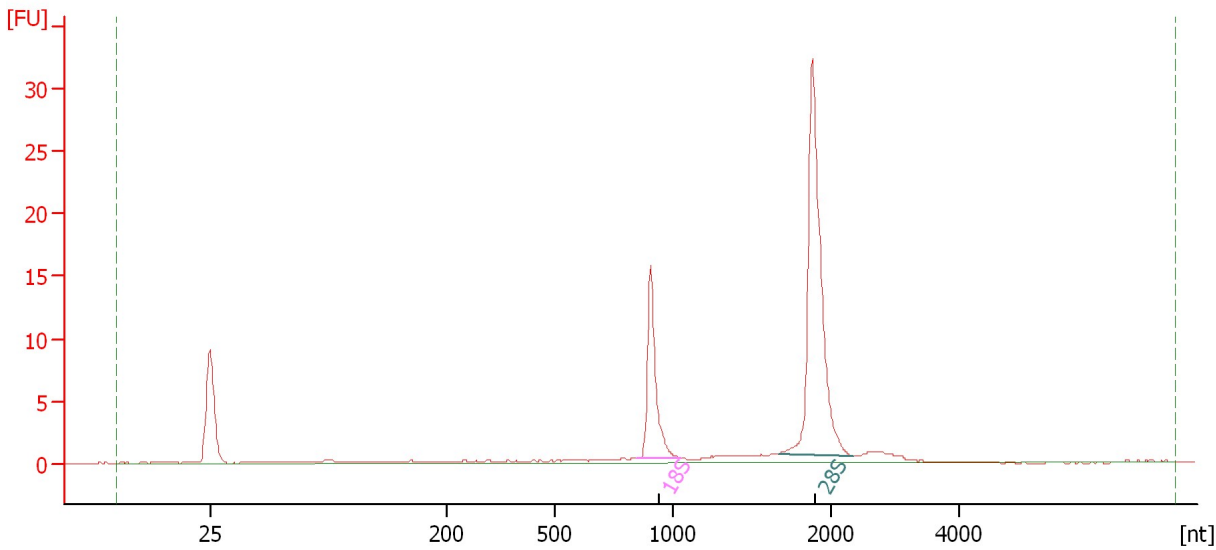
Name	Start Size [nt]	End Size [nt]	Area	% of total Area
18S	855	1,113	12.2	20.8
28S	1,777	2,398	29.4	49.9

Assay Class: Eukaryote Total RNA Nano
Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
Modified: 1/5/2016 1:58:55 PM

Electropherogram Summary Continued ...

5: IG-2 [Knoepler/Bush Total RNA QC]



Overall Results for sample 7 : 5: IG-2

RNA Area: 78.8 RNA Integrity Number (RIN): 9.8 (B.02.08)
RNA Concentration: 81 ng/μl Result Flagging Color:
rRNA Ratio [28s / 18s]: 2.7 Result Flagging Label: RIN: 9.80

Fragment table for sample 7 : 5: IG-2

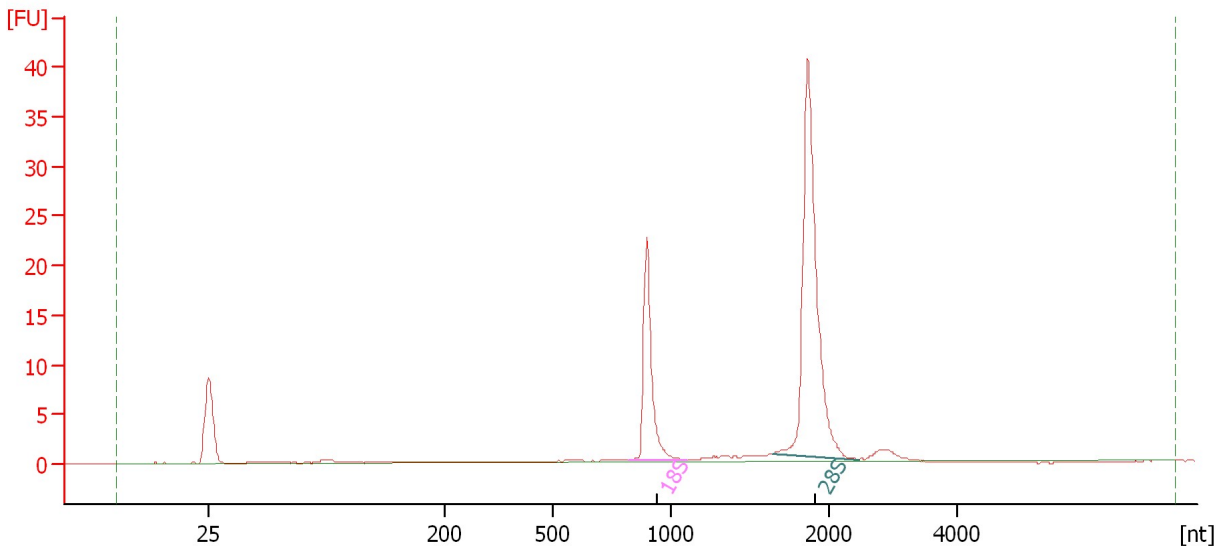
Name	Start Size [nt]	End Size [nt]	Area	% of total Area
18S	846	1,052	15.7	19.9
28S	1,670	2,318	42.0	53.3

Assay Class: Eukaryote Total RNA Nano
Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
Modified: 1/5/2016 1:58:55 PM

Electropherogram Summary Continued ...

8: 1H-2 [Knoepler/Bush Total RNA QC]



Overall Results for sample 8 : 8: 1H-2

RNA Area: 96.4 RNA Integrity Number (RIN): 10 (B.02.08)
RNA Concentration: 99 ng/μl Result Flagging Color:
rRNA Ratio [28s / 18s]: 2.6 Result Flagging Label: RIN:10

Fragment table for sample 8 : 8: 1H-2

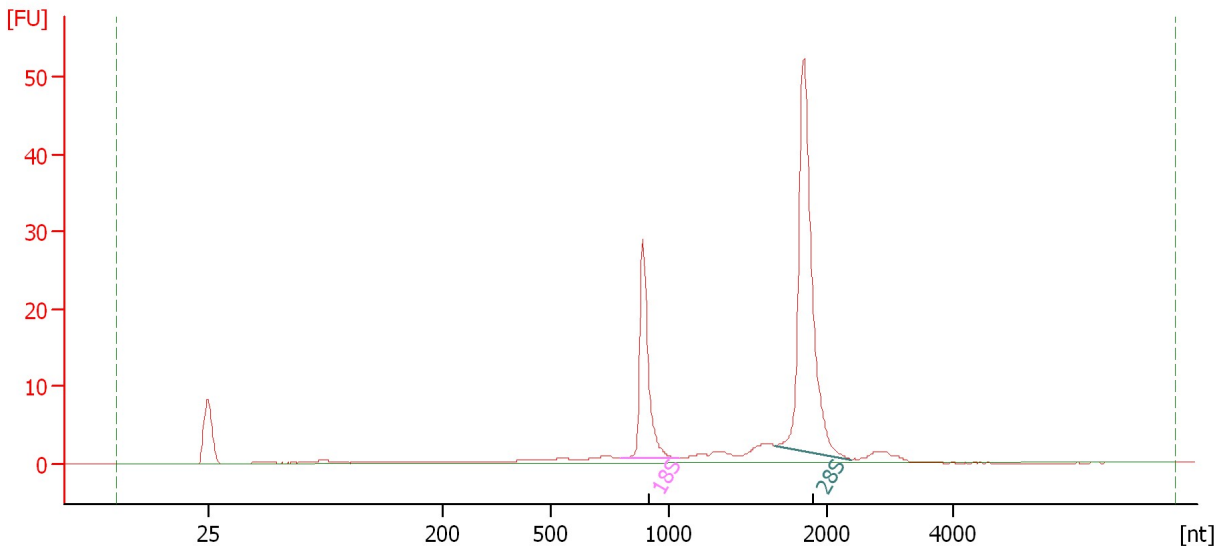
Name	Start Size [nt]	End Size [nt]	Area	% of total Area
18S	822	1,105	21.3	22.1
28S	1,637	2,457	56.1	58.2

Assay Class: Eukaryote Total RNA Nano
Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
Modified: 1/5/2016 1:58:55 PM

Electropherogram Summary Continued ...

11: 2A-2 [Knoepler/Bush Total RNA QC]



Overall Results for sample 9 : 11: 2A-2

RNA Area: 138.2 RNA Integrity Number (RIN): 9.8 (B.02.08)
RNA Concentration: 142 ng/μl Result Flagging Color:
rRNA Ratio [28s / 18s]: 2.4 Result Flagging Label: RIN: 9.80

Fragment table for sample 9 : 11: 2A-2

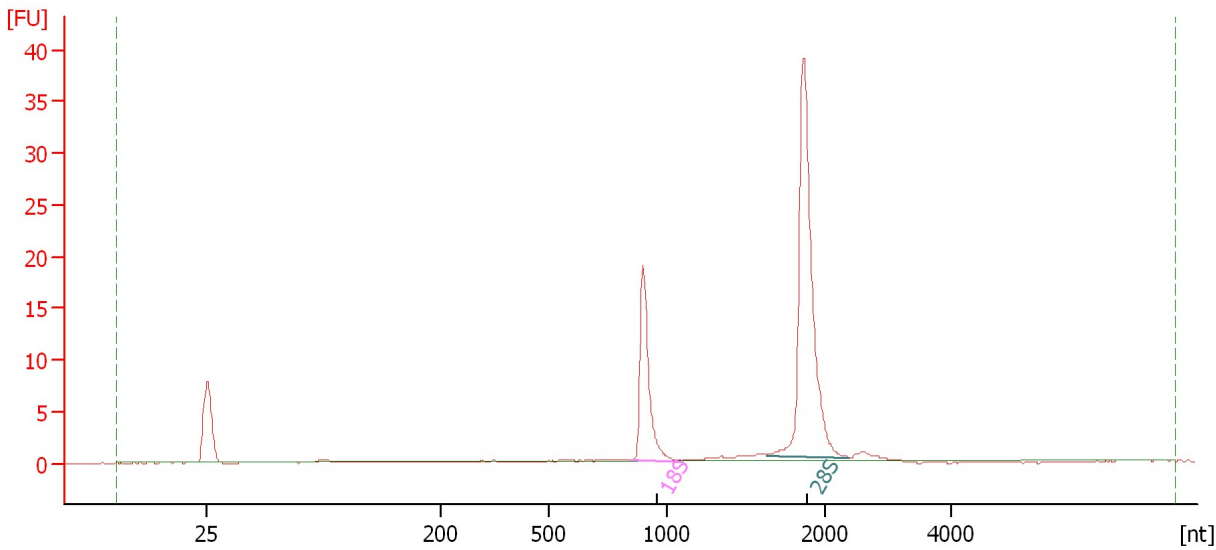
Name	Start Size [nt]	End Size [nt]	Area	% of total Area
18S	799	1,065	28.3	20.5
28S	1,672	2,378	67.9	49.1

Assay Class: Eukaryote Total RNA Nano
Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
Modified: 1/5/2016 1:58:55 PM

Electropherogram Summary Continued ...

14: 2E-2 [Knoepler/Bush Total RNA QC]



Overall Results for sample 10 : 14: 2E-2

RNA Area: 82.6 RNA Integrity Number (RIN): 9.9 (B.02.08, Anomaly Threshold(s) manually adapted)
RNA Concentration: 85 ng/μl
rRNA Ratio [28s / 18s]: 2.6
Result Flagging Color:
Result Flagging Label: RIN: 9.90

Fragment table for sample 10 : 14: 2E-2

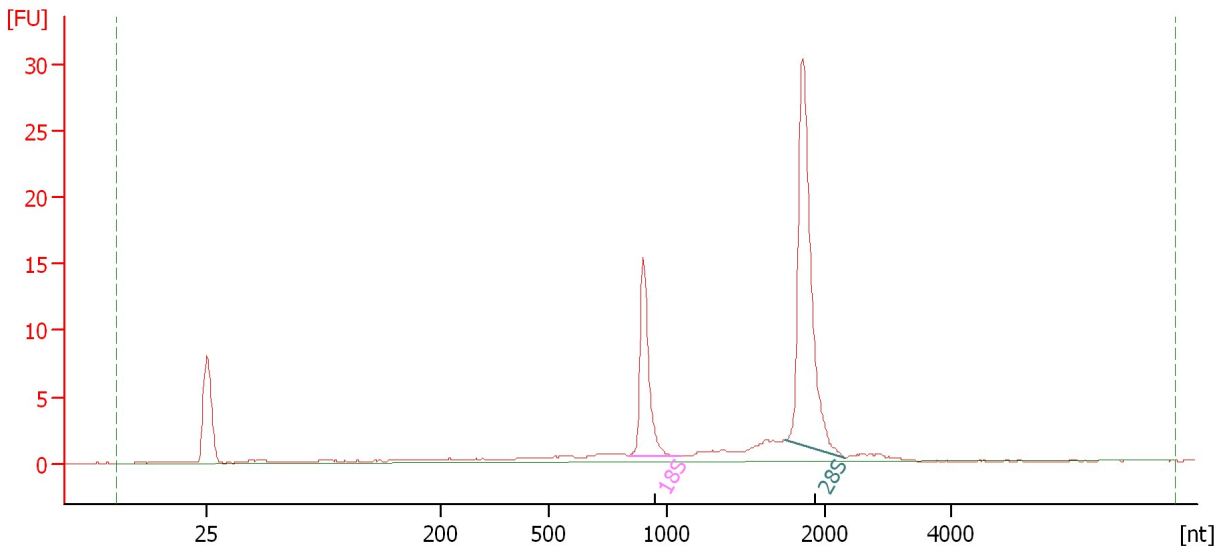
Name	Start Size [nt]	End Size [nt]	Area	% of total Area
18S	848	1,098	19.4	23.4
28S	1,632	2,399	50.5	61.1

Assay Class: Eukaryote Total RNA Nano
Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
Modified: 1/5/2016 1:58:55 PM

Electropherogram Summary Continued ...

3: WT-3 [Knoepler/Bush Total RNA QC]



Overall Results for sample 11 : 3: WT-3

RNA Area: 86.7 RNA Integrity Number (RIN): 9.4 (B.02.08)
RNA Concentration: 89 ng/μl Result Flagging Color:
rRNA Ratio [28s / 18s]: 2.5 Result Flagging Label: RIN: 9.40

Fragment table for sample 11 : 3: WT-3

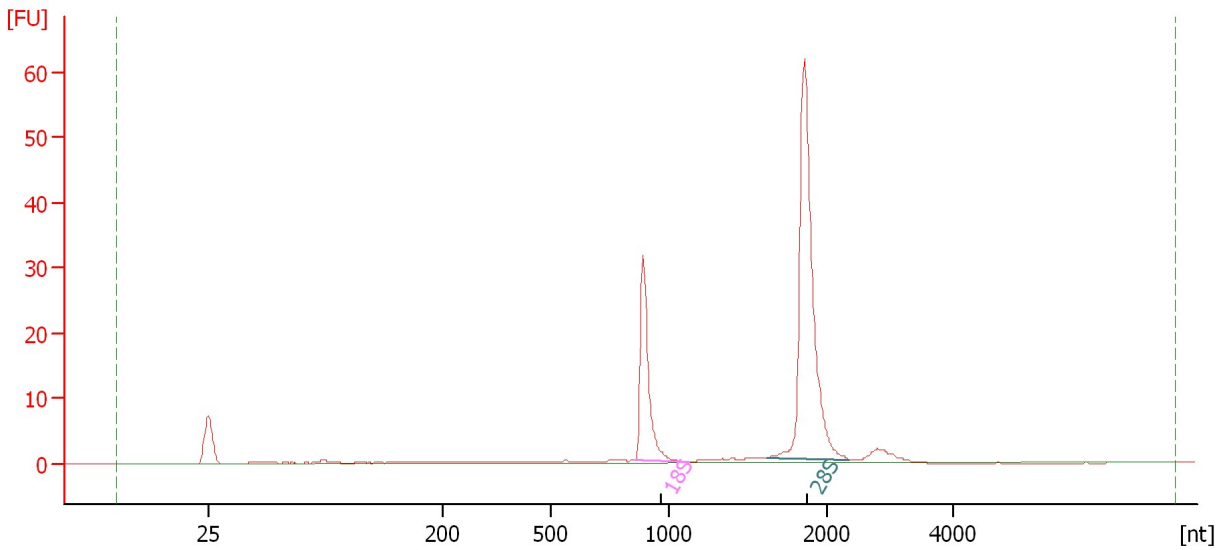
Name	Start Size [nt]	End Size [nt]	Area	% of total Area
18S	839	1,091	15.3	17.7
28S	1,747	2,315	37.9	43.7

Assay Class: Eukaryote Total RNA Nano
Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
Modified: 1/5/2016 1:58:55 PM

Electropherogram Summary Continued ...

6: IG-3 [Knoepler/Bush Total RNA QC]



Overall Results for sample 12 : 6: IG-3

RNA Area: 133.5 RNA Integrity Number (RIN): 9.9 (B.02.08)
RNA Concentration: 137 ng/μl Result Flagging Color:
rRNA Ratio [28s / 18s]: 2.6 Result Flagging Label: RIN: 9.90

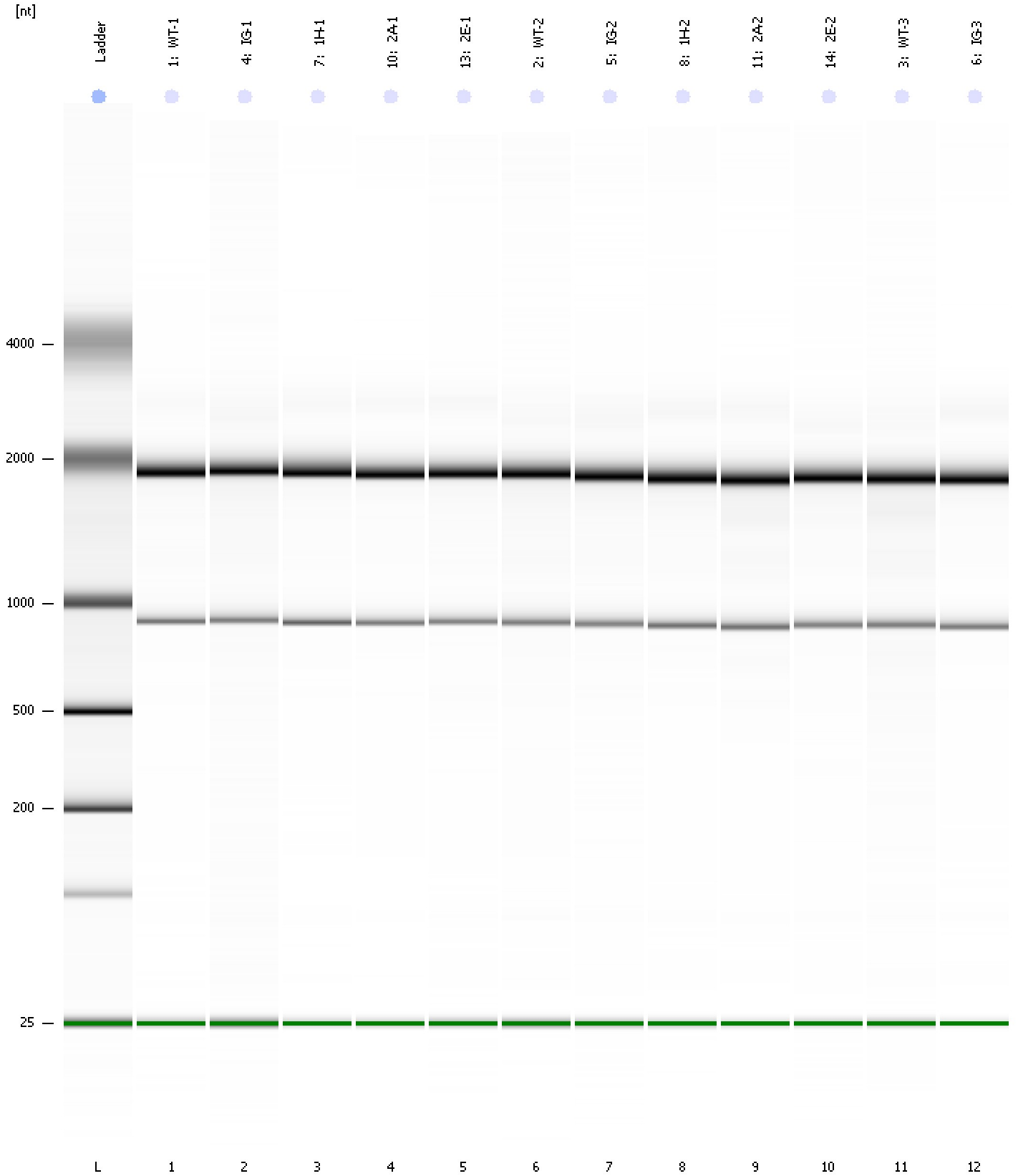
Fragment table for sample 12 : 6: IG-3

Name	Start Size [nt]	End Size [nt]	Area	% of total Area
18S	858	1,125	30.3	22.7
28S	1,625	2,361	79.7	59.7

Assay Class: Eukaryote Total RNA Nano
Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad

Created: 1/5/2016 1:19:34 PM
Modified: 1/5/2016 1:58:55 PM

Gel Image



Assay Class: Eukaryote Total RNA Nano Created: 1/5/2016 1:19:34 PM
 Data Path: C:\...ents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad Modified: 1/5/2016 1:58:55 PM

Run Logbook

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 13)		Instrument	Run		1/5/2016 1:43:22 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2016-01-05\2016-01-05_001.xad)		Instrument	Run		1/5/2016 1:19:40 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		1/5/2016 1:19:40 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		1/5/2016 1:19:40 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		1/5/2016 1:19:40 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		1/5/2016 1:19:40 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		1/5/2016 1:19:40 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		1/5/2016 1:19:40 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1