

## Guideline for total RNA and genomic DNA sample submission

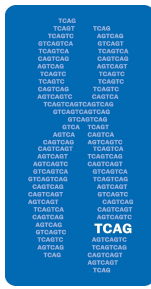
### Total RNA Quantity Recommendation:

Source	Array Name	Type *	Input Amount	Rxn Vol*	Best to Submit	Ref Source	Reference Files
E coli	E coli Genome 2.0	IVT	10 ug	20 ul	>15 ug/30ul	Affymetrix	Expression Analysis Technical Manual
	miRNA		0.1ug - 1.0 ug	8.0 ul	>1.5 ug	Genisphere	FlashTag Biotin HSR for Affymetrix
Human	u133 plus 2.0	IVT	50 ng - 500 ng	5.0 ul	>150 ng/7 ul	Affymetrix	User Manual: GenChip 3' IVT Express kit
Mouse	430 2.0	IVT	50 ng - 500 ng	5.0 ul			
Rat	230 2.0	IVT	50 ng - 500 ng	5.0 ul			
Human	u133 plus 2.0	IVT	5 ng - 50 ng	5.0 ul	>30 ng/ 7ul	NuGen	User Guide: Ovation RNA amplification system v2
Mouse	430 2.0	IVT	5 ng - 50 ng	5.0 ul			
Rat	230 2.0	IVT	5 ng - 50 ng	5.0 ul			
Human	Gene 1.0, 1.1, 2.0, 2.1 ST, Transcriptome	WT	50 ng - 500 ng	3.0 ul	>200 ng/5.0 ul	Affymetrix	Affymetrix WT Plus Kits
Mouse		WT	50 ng - 500 ng	3.0 ul			
Rat		WT	50 ng - 500 ng	3.0 ul			
Human	Gene 1.0, 1.1, 2.0, 2.1 ST, Transcriptome	WT	5 ng - 50 ng	2.0 ul	>50 ng/5 ul	NuGen	User Guide: WT-Ovation RNA Amplification System
Mouse		WT	5 ng - 50 ng	2.0 ul			
Rat		WT	5 ng - 50 ng	2.0 ul			

### Genomic DNA sample requirement:

Human	SNP 6.0	SNP	500 ng	10 ul	> 750ng/15ul	Affymetrix	Affymetrix Genome Wide Human SNP
Mouse		SNP	500 ng	10 ul	> 750ng/15ul	Affymetrix	Nsp/Sty 6.0 User Guide
Human	CytoScan HD	SNP	250 ng	5.0 ul	>350ng/7.0ul	Affymetrix	CytoScan HD array manual

Please contact facility staff if you have any other questions or the array of your choice is not listed on this page.



## Sample quality of total RNA and genomic DNA

### DNase treatment:

It is generally recommended to use DNase treated RNA for GeneChip sample preparation

### RNA Purity:

Sample must be free of contaminating proteins and other cellular material, organic chemicals.

A260:A280 ratio > 1.8

lower ratio often indicates protein contamination

A260:A230 ratio > 1.8

lower ratio often indicates some chemical contamination. Depending upon the nature of contamination, it could fail the sample preparation.

### RNA Integrity Number (RIN):

RIN > 7.0 for IVT arrays, > 6.0 for WT arrays

Agilent 2100 Bioanalyzer

### Genomic DNA sample quality requirement:

### DNA Purity:

Sample must be free of contaminating proteins and other cellular material, organic chemicals.

A260:A280 ratio > 1.7

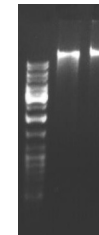
lower ratio often indicates protein contamination

A260:A230 ratio > 1.7

lower ratio often indicates some chemical contamination. Depending upon the nature of contamination, it could fail the sample preparation.

### DNA Integrity:

clear single band well over 10k DNA ladder (1% agarose gel electrophoresis with 50 ng to 100 ng DNA)



Note: IVT – (T7 based) *in vitro* transcription; WT – whole transcript (expression analysis); SNP – single nucleotide polymorphism; Rxn vol – maxi volume (ul) allowed in sample preparation.

Last update: October 21, 2015