



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 ST Exon 1.0 ST	WT	50 ng - 500 ng	3.0 ul	>200 ng/5.0 ul	Ambion	The Ambion WT Expresson Kit manual
Mouse		WT	50 ng - 500 ng	3.0 ul			
Rat		WT	50 ng - 500 ng	3.0 ul			
Human	Gene 1.0 ST Exon 1.0 ST	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 Nsp/Sty 6.0 User Guide
Mouse		SNP	500 ng	10 ul	> 750ng/15ul	Affymetrix	
Human	250k SNP	SNP	250 ng	5.0 ul	>350ng/7.0ul	Affymetrix	GeneChip Mapping 500k Assay 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

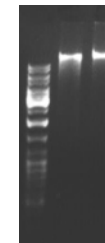
lower ratio often indicates protein contamination

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: May 10, 2010