

Guidelines for Sample Preparation/Submission

Microarray and Next-Generation Sequencing

Microarray Analysis

1 - 2 micrograms (μg) at a concentration of 200 - 250 $\text{ng}/\mu\text{l}$ is required

A separate aliquot (5 - 6 μl) of sample for QC analysis should be stored in a 0.2ml tube.

RNA Isolation

These recommendations are from protocols and manuals for isolation and purification of total RNA. Any samples submitted for processing should be isolated/purified using these protocols.

Isolation from Mammalian Cells

- RNeasy or microRNeasy Mini Kit from QIAgen

Isolation from Mammalian Tissue

- TRIzol isolation followed by DNase treatment followed by RNeasy/microRNeasy column purification

- Resuspend or elute samples in molecular biology grade water (nuclease-free), not in EB buffer or DEPC treated water.

TRIZol protocol available from Invitrogen website

DNase treatment of RNA should not be heated - this will degrade the RNA

RNeasy/microRNeasy column protocol available in the kit and QIAgen website

RNA Quantification

NanoDrop ND-1000 Spectrophotometer should be used to check quality and concentration of samples.

- A260/A280 should be $\sim 1.8 - 2.0$

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- A260/A230 should be ~2.0

A low 260/230 ratio indicates salt or another organic contaminant in the sample. The sample will need to be ethanol precipitated before it can be processed.

Next-Generation Sequencing

RNA should be 250ng/μl in concentration

Whole Transcriptome

10 micrograms is ideal; however, if quality of RNA is good, 5μg is acceptable

Small RNA

3 - 5 micrograms of good quality RNA

ChIP-Seq

50 ng of IP product

Confirmation of successful IP by qPCR should be performed

Exon-Seq

10 micrograms of good quality DNA

Kit for enrichment ordered through the facility