

Gene expression microarray sample requirements

Sample preparation

We recommend preparing samples in an RNase free environment and DNase treating all RNA samples as part of a standard RNA isolation protocol to ensure accurate quantification prior to initial QC at CGS. DNA contamination may result in overestimation of RNA amounts. For microRNA analysis, please isolate total RNA including small RNA. We recommend using miRNeasy mini kit or mirVana miRNA Isolation Kit for column purification.

Sample requirements

Unless otherwise discussed, gene expression arrays require a minimum of 500ng total RNA in nuclease free dH₂O (by NanoDrop or RiboGreen) with A260/A280 and A60/A230 ratios above 1.8. If a Bioanalyzer is available RNA with a RIN ≥8.0 is desirable.

Please provide two aliquots of each sample for processing

- Sample preparation: 0.3-0.5µg total RNA at a minimum 50 ng/µL in nuclease free dH₂O.
- Quality control: 5 µl aliquot of above sample **in separate tube/plate** at the same concentration (providing a QC aliquot helps to avoid the freeze thawing of samples, helping to minimise RNA degradation and increase data quality).

For <24 samples please send samples and QC aliquots in 1.5mL tubes; for ≥24 samples please send in 96 well PCR plates and ensure the plates are adequately sealed to prevent sample loss and cross contamination.

Sample labelling

Please make certain that the labels on both the sample preparation and quality control aliquots match each other and the sample sheet. For custom analysis, sample names should not include spaces and should reflect which (if any) experimental group the sample belongs to. For example in a case (C) control (CTRL) study with (T) and without treatment (NT) a suitable label would be assembled as follows, (patientID)_(C/CTRL)_(T/NT).

Shipping requirements

RNA may be handed in directly at the facility or can be shipped to us on dry ice at the following address.

FOA: Edward Farnell /Alexandra Karcianas/Emily Clemente
Cambridge Genomics Services,
Department of Pathology,
Tennis Court Road,
Cambridge,
CB2 1QP, UK