

Guidelines for sample submission to IMG M Laboratories GmbH

RNA analyses by microarray, qPCR and NGS

V2017.1

Option 1: RNA isolation at IMG M Laboratories GmbH

IMG M use sample source specific and state-of-the art procedures to extract RNA from your sample. In accordance with our quality management system, all experimental steps are extensively documented.

A RNA quality check using the 2100 Bioanalyzer (Agilent Technologies) will be performed at IMG M Laboratories by default.

Note: DNA isolation from particularly demanding starting materials is also available, e.g. from FFPE (formalin-fixed paraffin-embedded) tissues. Please inquire to obtain further information.

The prerequisite for obtaining high-quality RNA suitable for analysis is the appropriate sample collection, storage and shipment of starting materials. Recommendations for sample collection, storage and shipment of different starting materials will be provided upon request.

Sample volume requirements for standard RNA analyses at IMG M Laboratories GmbH

	Microarray	qPCR ^{*1)}	NGS
Tissue	10 – 100 mg	≥ 1 mg	10 – 100 mg
Cultured cells	5x10 ⁵ – 1x10 ⁷ cells	≥ 1x10 ⁵ cells	5x10 ⁵ – 1x10 ⁷ cells
Whole blood	2 PAXgene Blood RNA tubes per human donor; ≥ 1 ml animal blood stored in RNAlater	1 PAXgene Blood RNA tube per human donor; ≥ 500 µl animal blood stored in RNAlater	2 PAXgene Blood RNA tubes per human donor; ≥ 1 ml animal blood stored in RNAlater
White blood cells	1x10 ⁶ – 1x10 ⁷ cells	≥ 2x10 ⁵ cells	1x10 ⁶ – 1x10 ⁷ cells

*1) The required amount of starting material for qPCR analysis depends both on the RNA yield and on the number of target and housekeeping genes selected for analysis. The given amounts are generally sufficient for the analysis of one target gene and one housekeeping gene (if more genes are to be analyzed, please increase the amount accordingly).

Note: If required, smaller amounts of starting material can also be analyzed. Please inquire further information. All samples to be compared in a study must be processed according to the same protocol.

Option 2: RNA isolation by the customer

Customers may provide their total RNA samples to IMG M Laboratories for RNA analysis.

A RNA quality check using the 2100 Bioanalyzer (Agilent Technologies) will be performed at IMG M Laboratories by default.

The prerequisite for obtaining high-quality RNA suitable for analysis is the appropriate sample collection, storage and shipment of starting materials. For isolation of total RNA, IMG M recommend using a silica membrane-based method (e.g. RNeasy Kits provided by Qiagen). If your samples were isolated using a phenol-based method, we highly recommend purifying these samples before analysis (RNeasy MinElute CleanupKit, Qiagen). Recommendations for sample collection, storage and shipment of different starting materials will be provided upon request.

Sample volume requirements for standard analysis at IMGM Laboratories GmbH

	Microarray	qPCR ^{*2)}	NGS
Sample type	total RNA	total RNA	total RNA
Diluted in	RNase-free water	RNase-free water	RNase-free water
Amount	≥ 1.0 µg	≥ 200 ng	≥ 500 ng
Normalized Conc.	50 – 200 ng/µl	50 – 200 ng/µl	≥ 200 ng/µl
Volume	≥ 10 µl	≥ 10 µl	≥ 10 µl
Container	1.5 ml tubes	1.5 ml tubes	1.5 ml tubes

*2) The required amount of total RNA for qPCR analysis depends on the number of target and housekeeping genes selected for analysis. The given amounts are generally sufficient for the analysis of one target gene and one housekeeping gene (if more genes are to be analyzed, please increase the amount accordingly).

If samples are sent not normalized, an additional handling fee of 5.00 € is charged per sample.

Note: If required, smaller amounts of starting material can also be analyzed. Please inquire further information. All samples to be compared in a study must be processed according to the same protocol.

Sample shipment information

Starting material or RNA samples should be shipped on dry ice.

The following information about sample material is required at IMGM Laboratories GmbH (eg. electronic sample information sheet):

- Nature of the material (e.g. brain tissue, cells in RNAlater or RNAProtect, total RNA, ...)
- Sample collection / isolation method
- Approximate amount (e.g. weight, volume, concentration, ...)
- Sample IDs, labels on tubes

Please send your samples to the following address:

IMGM Laboratories GmbH
Probenannahme / Sample receipt
 Bunsenstr. 7a
 82152 Planegg/Martinsried
 Germany