

Sample Submission Guide

Application	Input material	Optimal amount (per sample)	Concentration range	Turn-around time*
All samples should be submitted in $\geq 15 \mu\text{l}$ volume				
DNA				
Whole Genome Sequencing (WGS)	Purified gDNA	Standard: $>10 \text{ ng}$ PCR free protocol: $>100\text{ng}$	5-50 ng/ μl	2-3 weeks
Targeted Resequencing	Purified gDNA/ Amplicon	Standard: $>10 \text{ ng}$ PCR free protocol: $>100\text{ng}$	5-50 ng/ μl	2-3 weeks
Whole Exome Sequencing (WES)	Purified gDNA	500 ng	50-200 ng/ μl	2-3 weeks
ChIP-Sequencing/complexity reduction	Enriched DNA	Standard: $>10 \text{ ng}$ PCR free protocol: $>100\text{ng}$	$>2 \text{ ng}/\mu\text{l}$	2-3 weeks
Whole Genome Bisulfite Sequencing (WGBS)	Purified gDNA	100 ng	$>10 \text{ ng}/\mu\text{l}$	3-4 weeks
Mitochondrial DNA (mtDNA)	Purified gDNA	250-500 ng	5-50 ng/ μl	2-3 weeks
Microbiome 16S rRNA Sequencing	Purified gDNA	1-100 ng ^{***}	$>2 \text{ ng}/\mu\text{l}$	2-3 weeks
Whole Microbiome Sequencing	Purified gDNA	250-500 ng	5-50 ng/ μl	2-3 weeks
Methylation EPIC BeadChip (850K)	Purified gDNA	750-1000 ng	75-100 ng/ μl	4-6 weeks
PacBio Sequencing	Purified gDNA/ Amplicon	500 ng - 5 μg	$>50 \text{ ng}/\mu\text{l}$	2-6 weeks
RNA				
RNA-Seq using Poly-A selection ** (Gene-expression profiling)	Purified RNA	$\geq 100 \text{ ng}$	10-50 ng/ μl	3-4 weeks
RNA-Seq using rRNA reduction ** (Total transcriptome)	Purified RNA	$\geq 30 \text{ ng}$	3-50 ng/ μl	3-4 weeks
Small RNA-Seq	Purified RNA or equivalent of enriched small RNA	1000 ng or enriched equivalent	250-350 ng/ μl	3-4 weeks
Low-input RNA-Seq	Purified RNA (or cells)	1 ng	$>0.1 \text{ ng}/\mu\text{l}$	3-4 weeks
Single cell RNA-Seq	Methanol fixed cells	1,000 cells	1,000-10,000 cells	3-4 weeks

The table below specifies the input requirement for RNA samples. Be aware that these recommendations were determined using a high purity and quality reference sample. Samples of sub-optimal quality will require more material to achieve similar numbers.

Input	Optimal	Recommended	Minimum
Poly-A selection (Gene expression profiling)	$\geq 100 \text{ ng}$	$\geq 30 \text{ ng}$	1 ng
rRNA depletion (Total transcriptome)	$\geq 30 \text{ ng}$	$\geq 10 \text{ ng}$	0.5 ng
Expected duplicates	$< 30\%$	30 - 50%	$> 80\%$

* Turnaround time (TAT) depends on project size and starts after successful sample QC

** Optimal input for RNA-Seq based on 30% or less PCR duplicates

*** Depending on sample origin

Successful Sample Submission

To optimize sample transfer and prevent any delays in shipment, please consider our checklist.



Project Initiation

Your project will be initiated upon receipt of the completed and signed PO form. Please, do not ship samples before we have confirmed reception of your purchase order (PO) via email.



Sample Submission Form

After your project is initiated you will receive a confirmation email with a project number and a Sample Submission Form (SSF). Return the fully completed form by email and include a copy in your sample shipment.



Sample Identification

Each sample must be labelled with a unique GenomeScan code (GS_ID) as indicated in the SSF. When using 96-well plates, be sure that the labels associated with positions A1-H12 correspond to the sample ID as indicated on the SSF.



Biological Contaminants

Samples shipped to GenomeScan need to be free of biological contaminants. Our laboratory operates in compliance with BSL-1 and BSL-2 requirements and cannot handle potential hazardous materials. In general RNA/DNA samples extracted from cells or tissue do not represent a biological threat.



Shipment of samples

Shipping address:

GenomeScan
Plesmanlaan 1d, 4th floor
2333 BZ LEIDEN
The Netherlands

Samples can be shipped in a sealed bag or box in a polystyrene container.

- Preferably deliver your samples in 96-well plates.
- To ensure optimal preservation of the sample, we recommend shipment of (g)DNA using ice packs.
- Use dry ice for sending RNA samples.

Remember that international shipment may take longer than expected. Make sure that your package contains sufficient cooling materials to preserve the quality of your samples during transport. Avoid shipment of samples on days that will require transit on a weekend or over a holiday period.

About GenomeScan

As an ISO-accredited leading Dutch Next Generation Sequencing service provider, GenomeScan develops customizable NGS solutions for pharmaceutical and biotech companies, health care providers and academic institutions. By providing new tools to analyze genetic disorders quicker, affordably and effectively, GenomeScan fosters innovation through partnership with medical centers and research laboratories.

