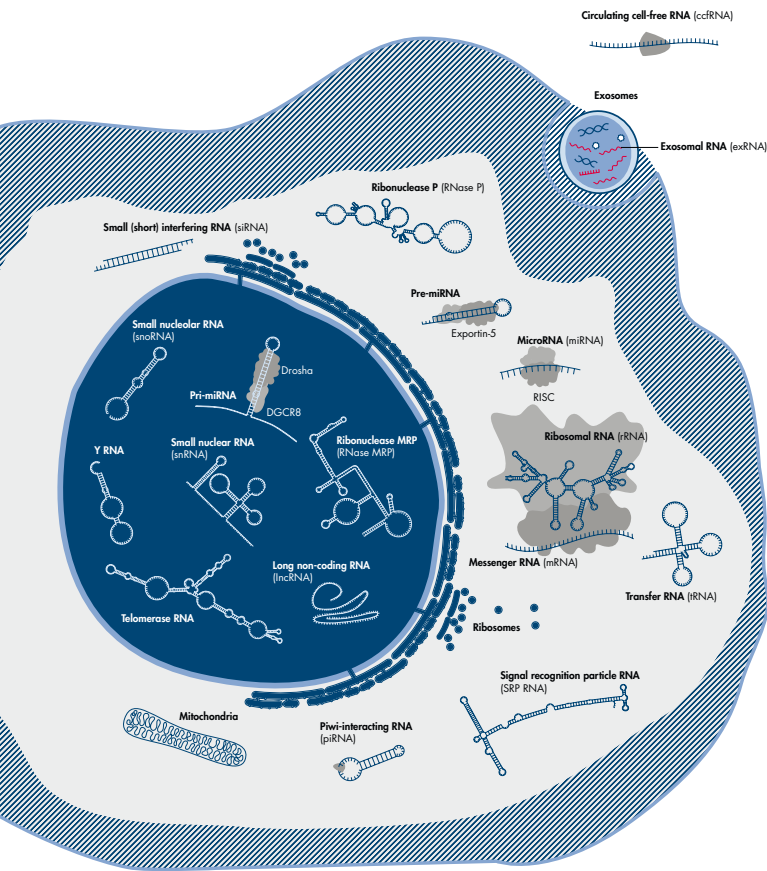




Explore the RNA Universe



Explore the RNA universe

Insights into RNA functions are changing our understanding of biomolecules, cells and diseases. Scientists worldwide are exploring and characterizing the RNA universe beyond just mRNA. Expanding our understanding of other RNA species, such as miRNA and lncRNA, is propelling these exciting areas of basic and clinical research into the limelight, creating a new frontier in biomarker discovery and research. QIAGEN offers an innovative portfolio of RNA analysis solutions that can help you gain more insights from your own RNA universe exploration. Read on to discover some of these featured products!

Enjoy RNA quality that's out of this world

Starting sample type	Target fraction			
	RNA >200 nucleotides: mRNA, lncRNA and other long RNAs	RNA enriched for miRNA and other small RNAs		
Cells or easy-to-lyse tissues	RNeasy® Mini, Midi and Maxi Kits RNeasy Plus Mini Kits*	miRNeasy® Mini Kit		
Low biomass/microsamples	RNeasy Micro Kit RNeasy Plus Micro Kit RNeasy UCP Micro Kit†	miRNeasy Micro Kit		
Fiber- or lipid-rich tissues	RNeasy Fibrous Tissue Kit RNeasy Lipid Tissue Kit RNeasy Plus Universal Kits	miRNeasy Mini Kit		
Plants and fungi	RNeasy Plant Mini Kit‡			
FFPE tissue	RNeasy FFPE Kit	miRNeasy FFPE Kit		
RNA cleanup and concentration	RNeasy MinElute® Cleanup Kit			
	Intact vesicles	Exosomal RNA	Cell-free miRNA	Cell-free total DNA, RNA
Serum/plasma	exoEasy Maxi Kit miRCURY® Exosome Kits	exoRNeasy Serum/Plasma Kits miRCURY Exosome Kits and miRNeasy Micro Kit or miRNeasy Serum/Plasma Kit	miRNeasy Serum/ Plasma Advanced Kit	QIAamp® ccfDNA/RNA Kit

* Includes gDNA Eliminator columns for gDNA removal. † UCP: ultra-clean production for minimal exogenous nucleic acids for RNA-seq of low-abundance targets. ‡ Includes QIAshredder for homogenization.

RNeasy Plus and miRNeasy Kits

- Obtain high-quality total RNA, including mRNA, miRNA and lncRNA from cells, tissues, FFPE and biofluids in minutes

PAXgene® Systems

- Stabilize RNA in human tissue or blood, followed by isolation of RNA or miRNA with the PAXgene RNA or miRNA kits
- Achieve unbiased gene expression data without artificial changes of mRNA levels

miRCURY Exosome Kits

- High-quality, scalable isolation of exosomes and other extracellular vesicles using a quick and easy protocol

QIAcube®

- Seamless automation of spin-column kits, including RNeasy, QIAamp, miRNeasy and many more
- Ensures standardized results and offers more time to focus on other tasks

QIAxpert® and QIAxcel® Advanced

- Quickly and easily assess sample concentration, purity and size distribution from minimal input volumes
- Save time and money and gain peace of mind by processing only the samples of highest quality

Propel your RNA analyses

QuantiNova® for SYBR® Green, Probe or Multiplex qPCR and qRT-PCR

- A new level of efficiency and reproducibility based on in-process safety features
- Pipetting controls and integrated gDNA removal minimize variables, while novel hot-start mechanisms add convenience

RT² Profiler PCR Assays and Arrays for mRNA and long non-coding RNA

- Complete system for SYBR Green PCR, available in pre-formatted panels by pathway, disease or your own custom list
- Integrated controls for all enzymatic steps and sample quality plus extensive, free online data analysis tools

miRCURY LNA® miRNA PCR System

- Sensitive qPCR-based miRNA profiling with minimal false positives in all sample types, even biofluids with low RNA content
- LNA provides unmatched specificity, enabling detection and profiling of all miRNAs, even AT-rich species

GeneGlobe®

- Find products and relevant scientific literature and swiftly build custom assays and arrays tailored to your research
- Primer assays and arrays for mRNA, miRNA, lncRNA, siRNA, genotyping and more

Antisense LNA GapmeRs

- Superior mismatch discrimination between specific and non-specific targets for higher potency functional analyses and minimal off-target effects
- Custom-designed oligonucleotides enable RNA silencing and ncRNA function analysis in animal models

miRCURY LNA miRNA Detection Probes

- High-affinity, LNA-enhanced probes for ISH studies with exceptional sensitivity and specificity

miRCURY LNA miRNA Inhibitors, Mimics and Target Site Blockers

- LNA enhancement provides high potency and minimal off-target effects for successful miRNA functional studies
- Potent, long-lasting inhibition in live animals allows studies of novel therapeutics

A solution for every step of your RNA workflow



Instruments

- QIAcube/QIAcube HT
- QIASymphony® SP/AS
- QIAxcel Advanced
- QIAxpert (for QC)
- QIAxpert
- QIAxcel Advanced

Kits and reagents

mRNA/lncRNA
profiling

- RNeasy Plus Kits
- RNeasy Kits for all sample types
- exoRNeasy Kits for exosomal RNA
- PAXgene Blood/Tissue RNA Systems for stabilization and purification
- **New!** Custom LNA Detection Probes For mRNA and lncRNA
- **New!** QIAseq™ Stranded mRNA Select Library Kit
- **New!** QIAseq Stranded Total RNA Library Kit
- QIAseq Targeted RNA Panels
- **New!** QIAseq UPX 3' Targeted RNA Panel
- **New!** QIAseq UPX 3' Transcriptome Library Kit
- QIAseq Targeted RNAscan Panels
- QIAseq FX Single Cell RNA Library Kit
- QIAseq miRNA Library Kit
- QIAseq miRNA Library QC PCR Panel and Assays

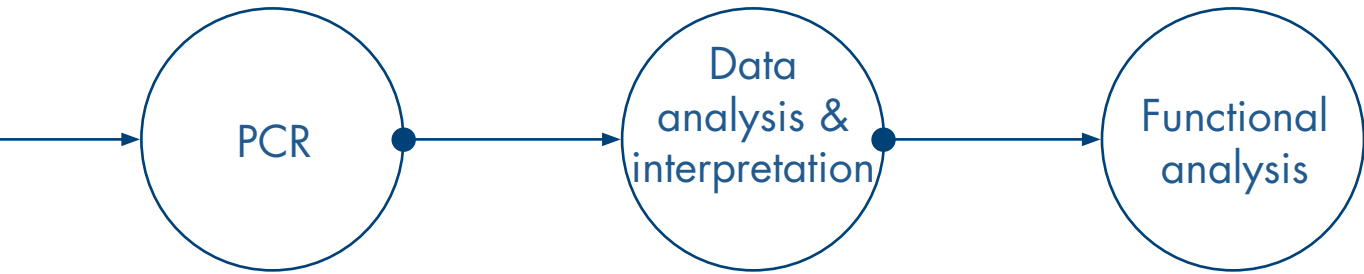
miRNA
profiling

Services

all

QIAGEN Genomic Services:

- Sample preparation
- NGS analysis
- qPCR analysis
- Data analysis and biological interpretation



- QIAgility
- Rotor-Gene® Q
- QIASymphony SP/AS

- RT² Profiler PCR Arrays
- Predesigned assays and pathway panels for mRNA and lncRNA

- QuantiNova qPCR Kits
- Combined with self-designed primers or QuantiTect® Primer Assays

- **New!** miRCURY LNA miRNA PCR System
- Predesigned or custom PCR assays and panels

- Ingenuity® Pathway Analysis (IPA®)
- CLC Biomedical Workbench
- GeneGlobe® Data Analysis Center

- **New!** miRCURY LNA miRNA Detection Probes

- **New!** Antisense LNA GapmeRs
- For mRNA and lncRNA silencing *in vitro* and *in vivo*

- **New!** miRCURY LNA miRNA Mimics, Inhibitors and Target Site Blockers
- For function analysis *in vitro* and *in vivo*

Jump-start your RNA sequencing

As scientific focus shifts from the theoretical potential of a cell embodied in genomics to the actual status of a cell mirrored in transcriptomics, RNA-seq has evolved into the leading application for NGS. Our comprehensive new collection of high-quality NGS kits, coupled with powerful bioinformatics, lets you dive into the complexity of the transcriptome by analyzing targeted or transcriptome-wide gene expression or cataloguing transcript variants, allelic expression patterns, fusion genes, lncRNAs, miRNAs and piRNAs.

Our new QIAseq RNA-seq kits are perfectly aligned with QIAGEN isolation kits and bioinformatics solutions for a complete Sample to Insight workflow.

QIAseq RNA-seq Kits

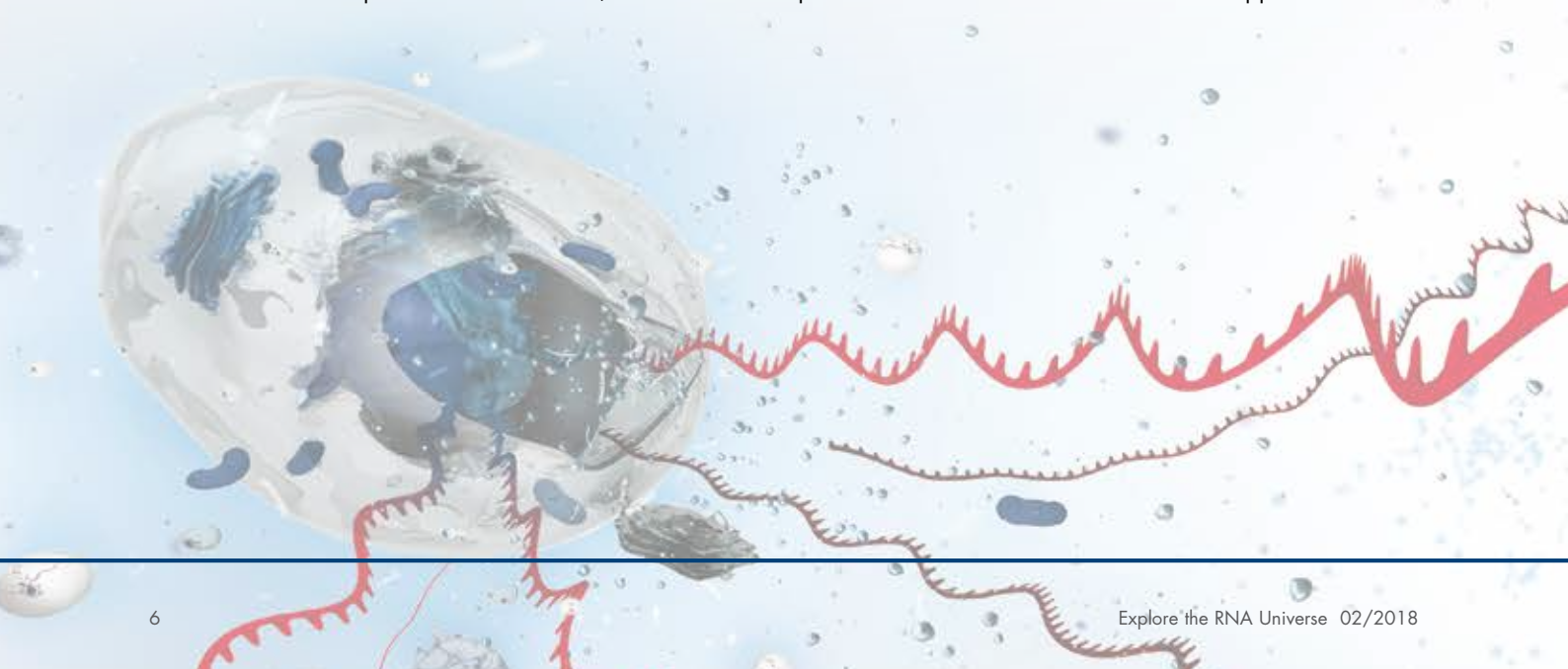
- Unique Molecular Indices (UMIs) for increased precision of sequencing data
- Ultra-plex (UPX) library construction to simplify low-input and single-cell analysis
- Streamlined workflows – like our gel-free workflow for miRNA library preparation – for fast and reproducible NGS library preparation

Bioinformatics solutions

- CLC Genomics Workbench enables comprehensive analysis and visualization of data from all major NGS platforms
- Ingenuity Pathway Analysis (IPA) provides integrative analysis and visualization capabilities that enable biologically meaningful interpretation of complex 'omics data with evidence-backed insights

RNA services

- Newly expanded Genomics Services laboratories combine Exiqon's industry-leading RNA expertise with QIAGEN's leading Sample to Insight solutions for a cutting-edge Service offering
- Provides endless possibilities to discover, characterize and profile RNA for basic research or clinical applications



The QIAseq RNA portfolio at a glance

QIAseq Kits for RNA library preparation

	Single cell – 100 cells; 10-1000 pg RNA			1-10 ng RNA			10-1000 ng RNA			mRNA			lncRNA detection			miRNA / piRNA, including cell-free RNA			Exosomal RNA			FFPE / fragmented RNA			Targeted panel			Universal library			Unique Molecular Indices (UMIs)			Ultra-plex library prep (UPX)			QIAseq Beads			Sample Index included (I) or extra (Ex)			Species			Illumina (IL) / Thermo-Fisher (TF)			Most common applications		
	Input sample and amount	Target RNA									Library type			Molecular Index			Included with library lot																																		
QIAseq UPX 3' Targeted RNAseq	•				•											•						•										Ex	Human Mouse	IL	High-throughput targeted gene expression																
QIAseq UPX 3' Transcriptome RNA Library Kit	•				•												•						•									Ex	Human Mouse Monkey	IL	High-throughput transcriptome-wide gene expression																
QIAseq Immune Repertoire RNA Library Kit (TCR Panel)																															Ex	Human Mouse	IL	Quantification & identity of T-cell receptor CDR3 region for clonotype identification																	
QIAseq Stranded mRNA Select Library Kit			•*																													I	Any	IL	mRNA enrichment for gene expression and isoform detection																
QIAseq Stranded Total RNA Library Kit																																	I	Any	IL	Use rRNA/globin depleted RNA for gene/lncRNA expression, RNA isoforms, SNVs. Compatible with meta-transcriptomics.															
QIAseq miRNA Library Kit																																Ex	Any	IL	miRNA, piRNA identification and quantification																
QIAseq Targeted RNA Panels																																Ex	Human Mouse	IL/TF	Gene expression of mRNA/lncRNA																
QIAseq Targeted RNAscan Panels																																Ex	Human	IL/TF	Fusion gene analysis																
QIAseq FX Single Cell RNA Library Kit	•																															I	Any	IL	Gene expression, RNA isoform detection																

*1-10 ng of enriched mRNA; usually achieved by starting with 100 ng of total RNA and using mRNA enrichment protocol included with the kit.

† 1-10 ng of depleted RNA; usually achieved by starting with 100 ng of total RNA and depleting ribosomal RNA and globin RNA (for applications from blood).

Visit www.qiagen.com/ExploreRNA and launch your own exploration into the RNA universe!

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