

## Overview

Trusted  
QuantiNova  
PCR chemistry

Complete  
workflow

Best coverage  
for all analysis  
needs

Exceptional  
linearity and  
sensitivity

Superior  
sensitivity

Biologically  
relevant results

Ordering  
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# QuantiNova® LNA® PCR System

In-depth, accurate and reliable gene expression analysis using LNA-enhanced SYBR® Green qPCR

- Broadest coverage with >1.3 million assays for human, mouse and rat mRNA and lncRNA Ensembl transcripts
- Accurate detection over a wide dynamic range starting at 1 RNA copy
- Optimized to prevent non-specific and gDNA amplification
- Robust and reproducible results in 2 hours with QuantiNova SYBR® Green PCR chemistry

LNA-enhancement improves primer  $T_m$  and enables:

- Differentiation of single nucleotide mismatches
- Flexible positioning of short primers with high binding affinity for any target
- Highly sensitive and specific analyses
- $T_m$  normalization and uniform target detection

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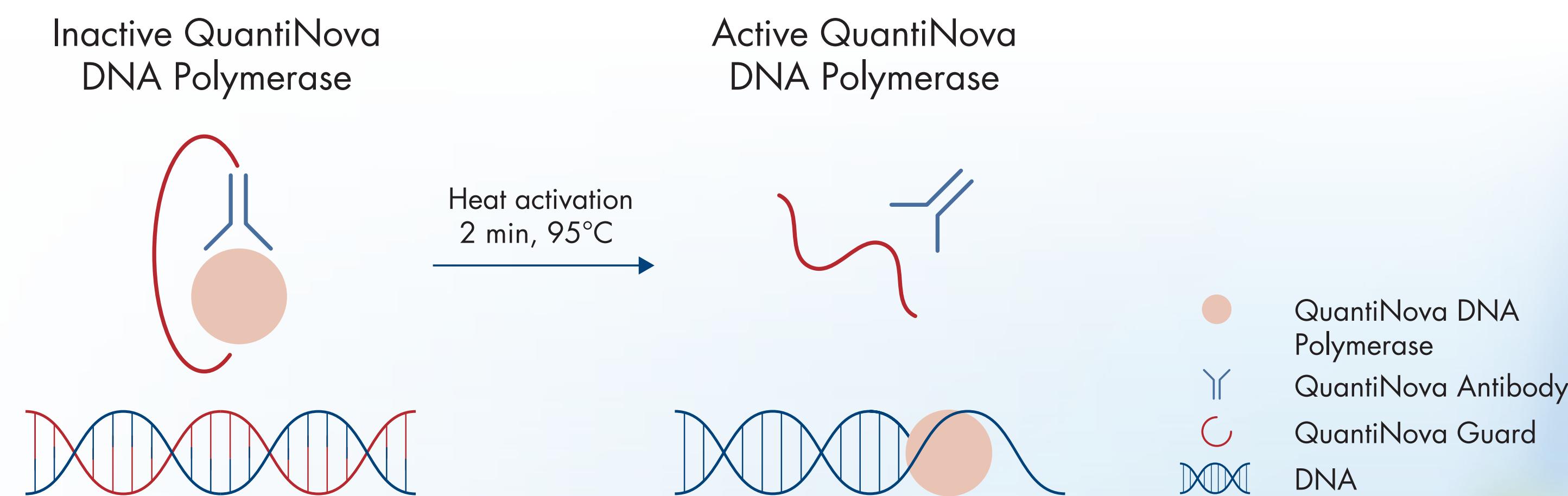
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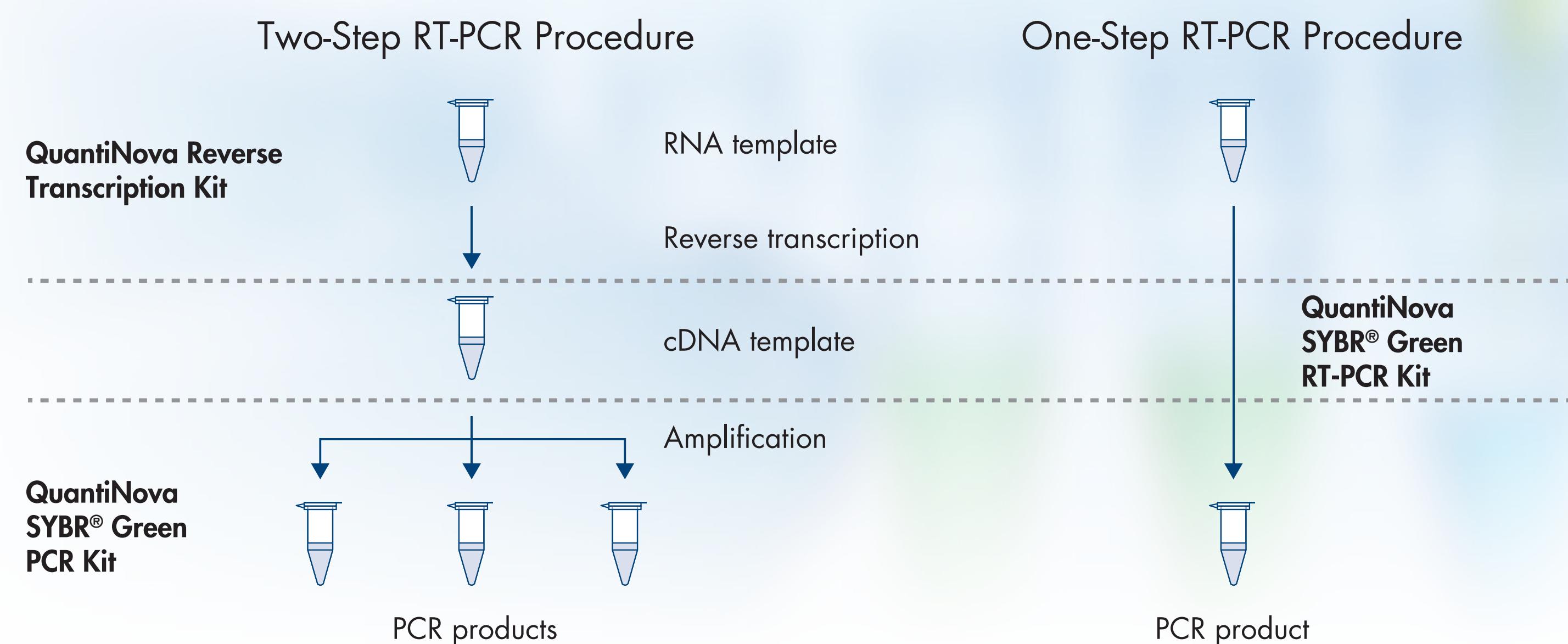
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# Robust results in just 2 hours with trusted QuantiNova PCR chemistry



Stringent hot start allows room-temperature and automated setup  
No need to worry about non-specific amplification



Ultrafast one- or two-step procedure  
Built-in color control verifies correct pipetting

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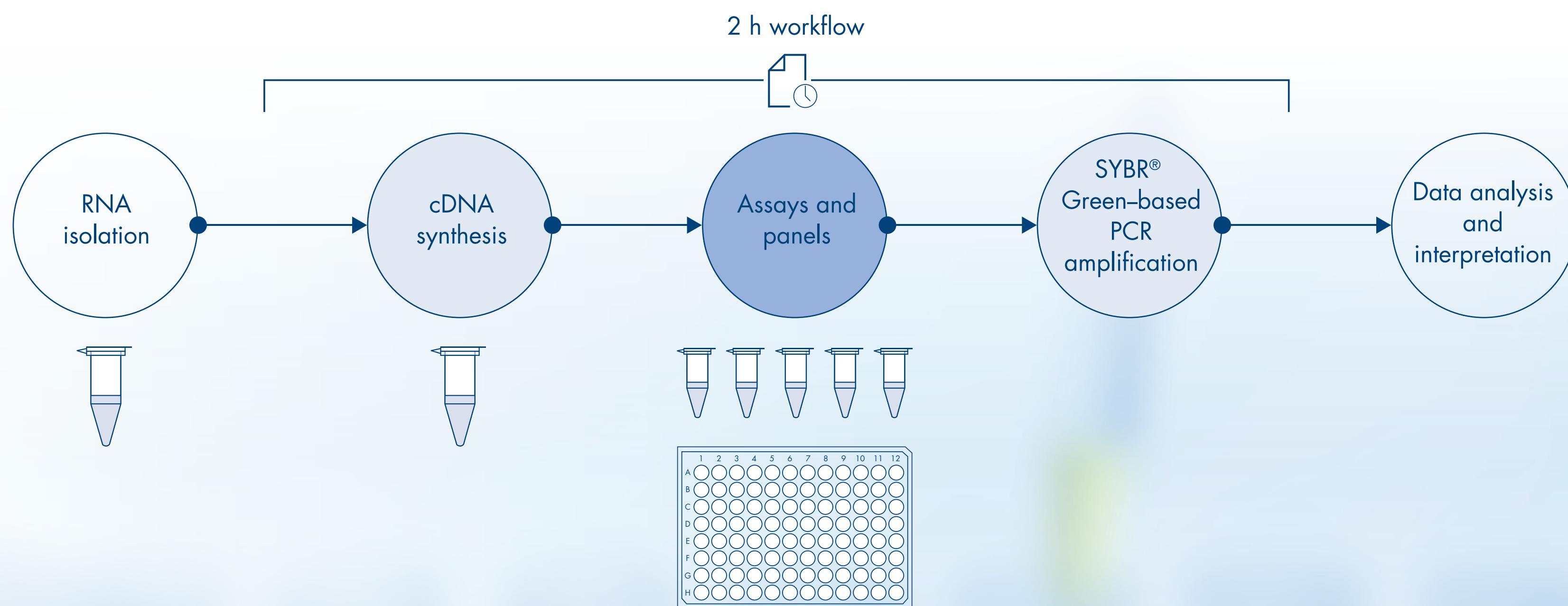
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# Fast and simple gene expression analysis – from Sample to Insight



## Cells or easy-to-lyse tissues

- RNeasy® Plus Mini Kits
- RNeasy Mini, Midi and Maxi Kits

## Low biomass, microsamples

- RNeasy Plus Micro Kit
- RNeasy Micro Kit

## Difficult-to-lyse tissues

- RNeasy Plus Universal Kits

## FFPE tissue

- RNeasy FFPE Kit

## Exosomal RNA

- exoRNeasy Kits

## QuantiNova Reverse Transcription Kit

## QuantiNova LNA PCR

- Predesigned assays
- Custom assays
- Focus mRNA/IncRNA Panels
- Flexible Panels
- Custom panels

## QuantiNova PCR Kit QuantiNova RT-PCR Kit

## GeneGlobe® Data Analysis Center

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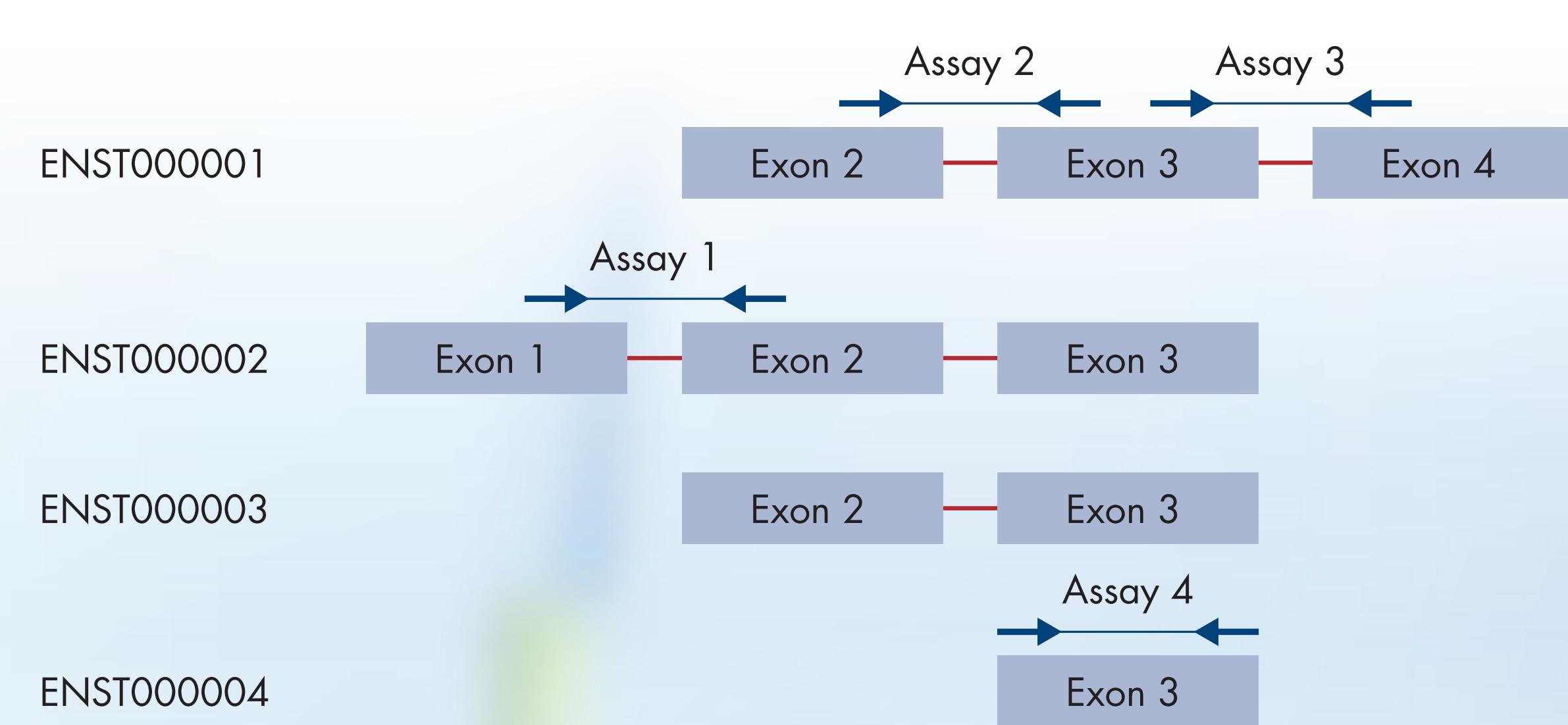
# Best and largest assay coverage of virtually all mRNA and lncRNA targets in Ensembl

Over 1.3 million predesigned human, mouse and rat assays include:

- Three assay types covering all analysis needs
  - General transcript detection
  - Detection of a specific transcript
  - Isoform differentiation
- Wet-lab validation of all popular human and mouse assays

Robust design algorithm guarantees the optimal assay for successful detection:

- Over 50 different parameters validated against highly stringent performance criteria
- Sophisticated custom design tool for specialized requests



**Assays are intron-spanning when possible and cover all analysis needs:** general transcript detection (assays 2, 4), detection of a specific transcript (assays 1, 3) and isoform differentiation (not shown).

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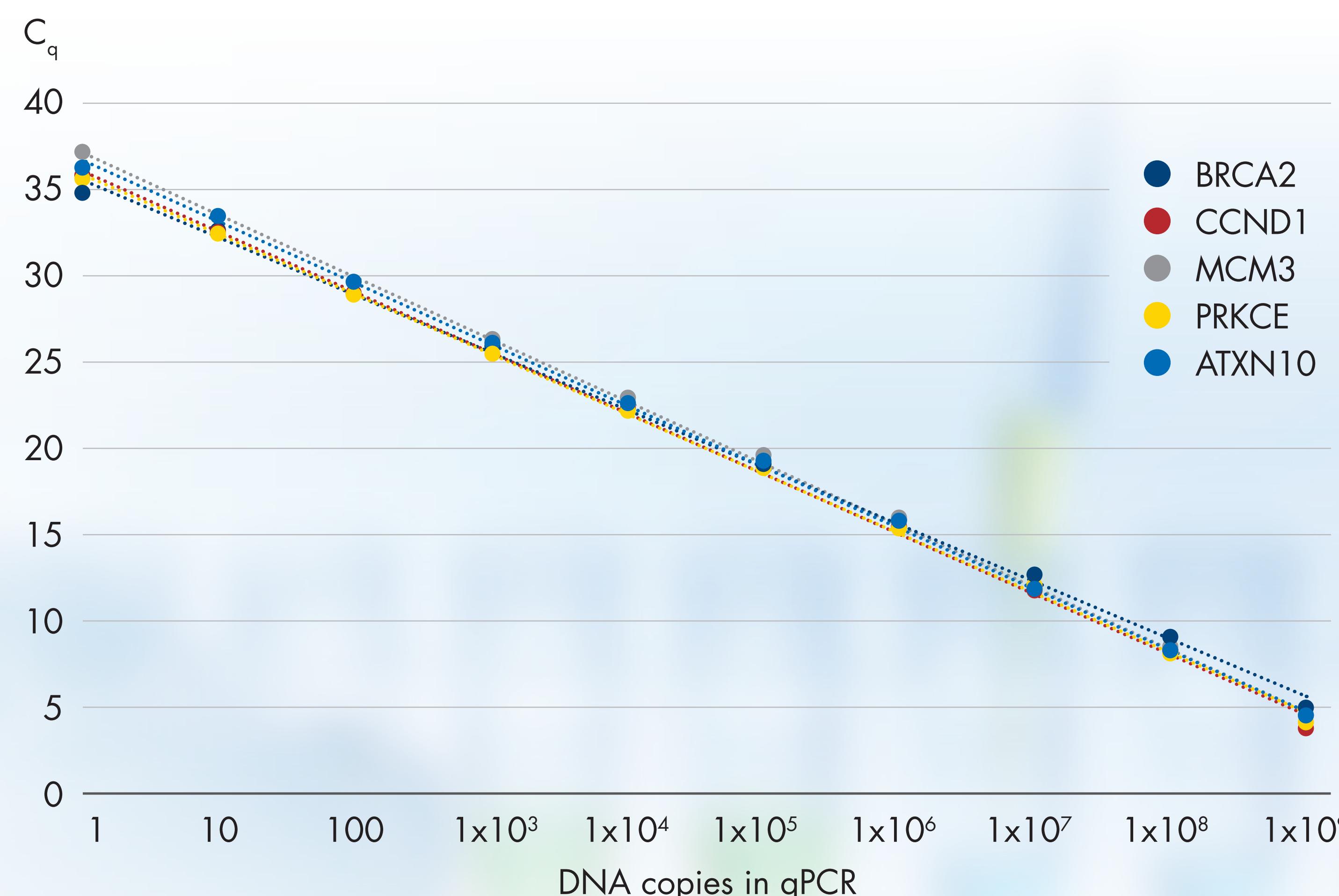
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# Exceptional linearity and highly sensitive detection even at 1 template copy



# Accurately detect both low- and high-level target expression

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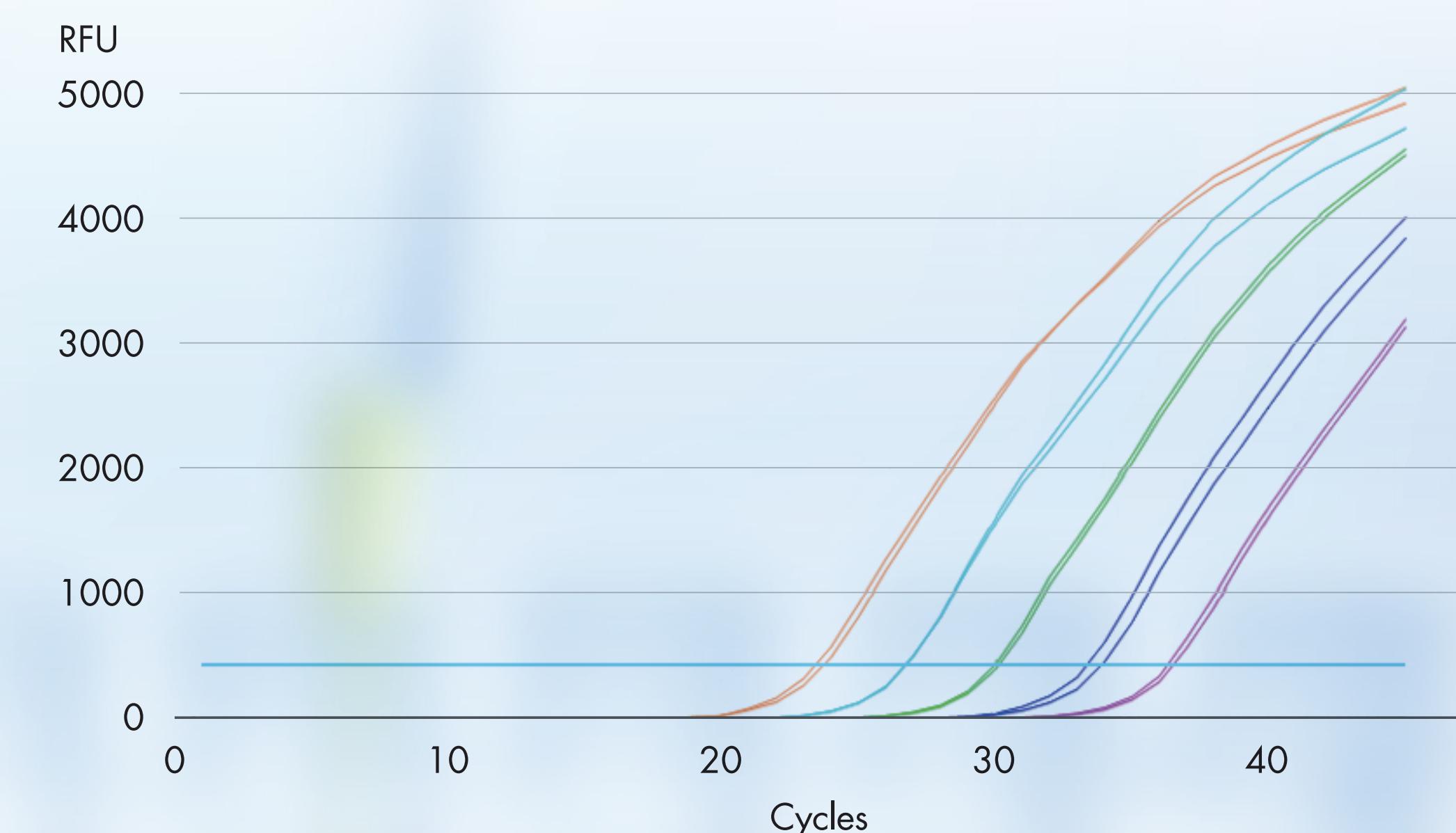
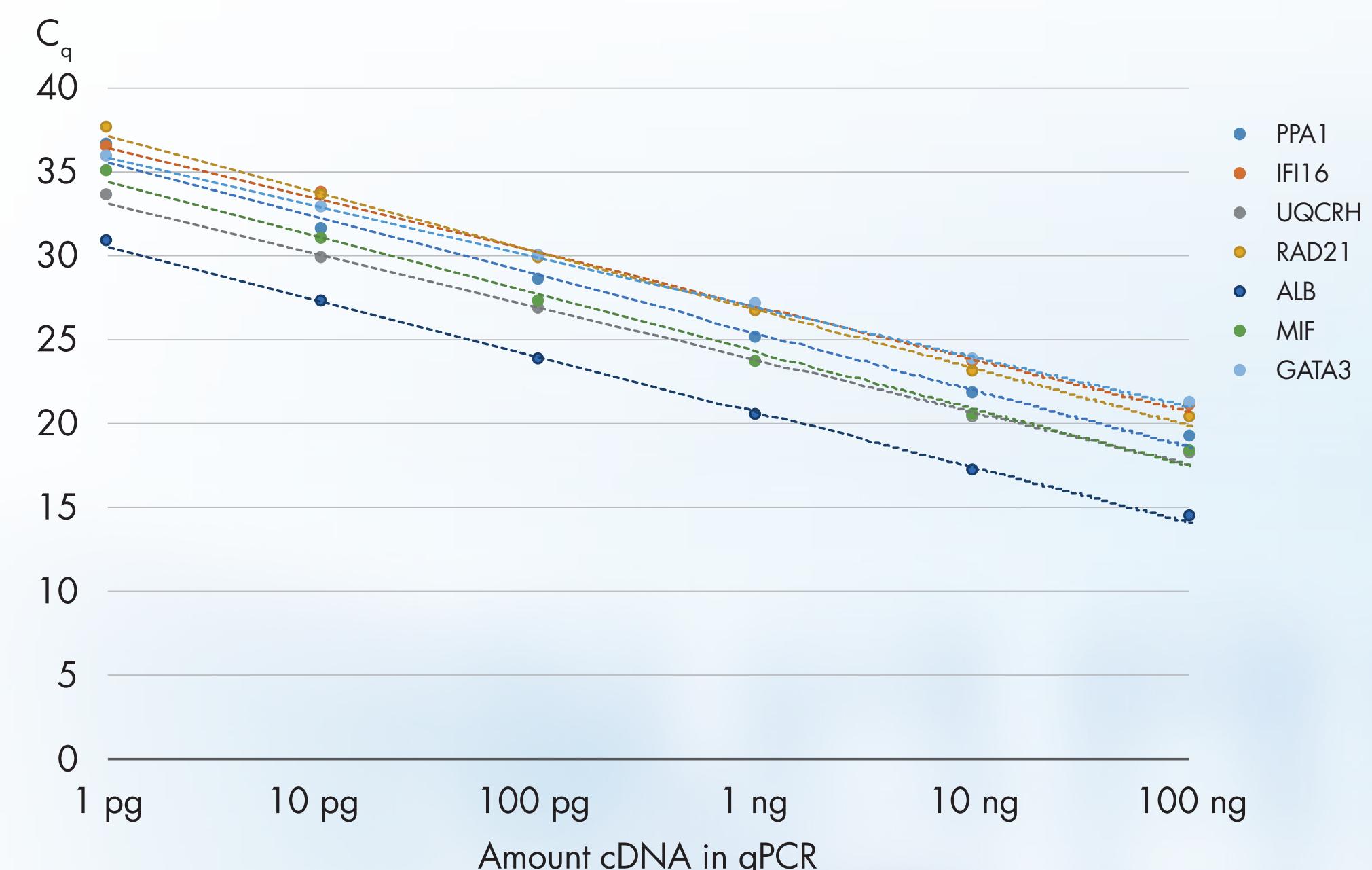
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Sample to Insight



Superior sensitivity – reliable detection from just 1 pg of cDNA

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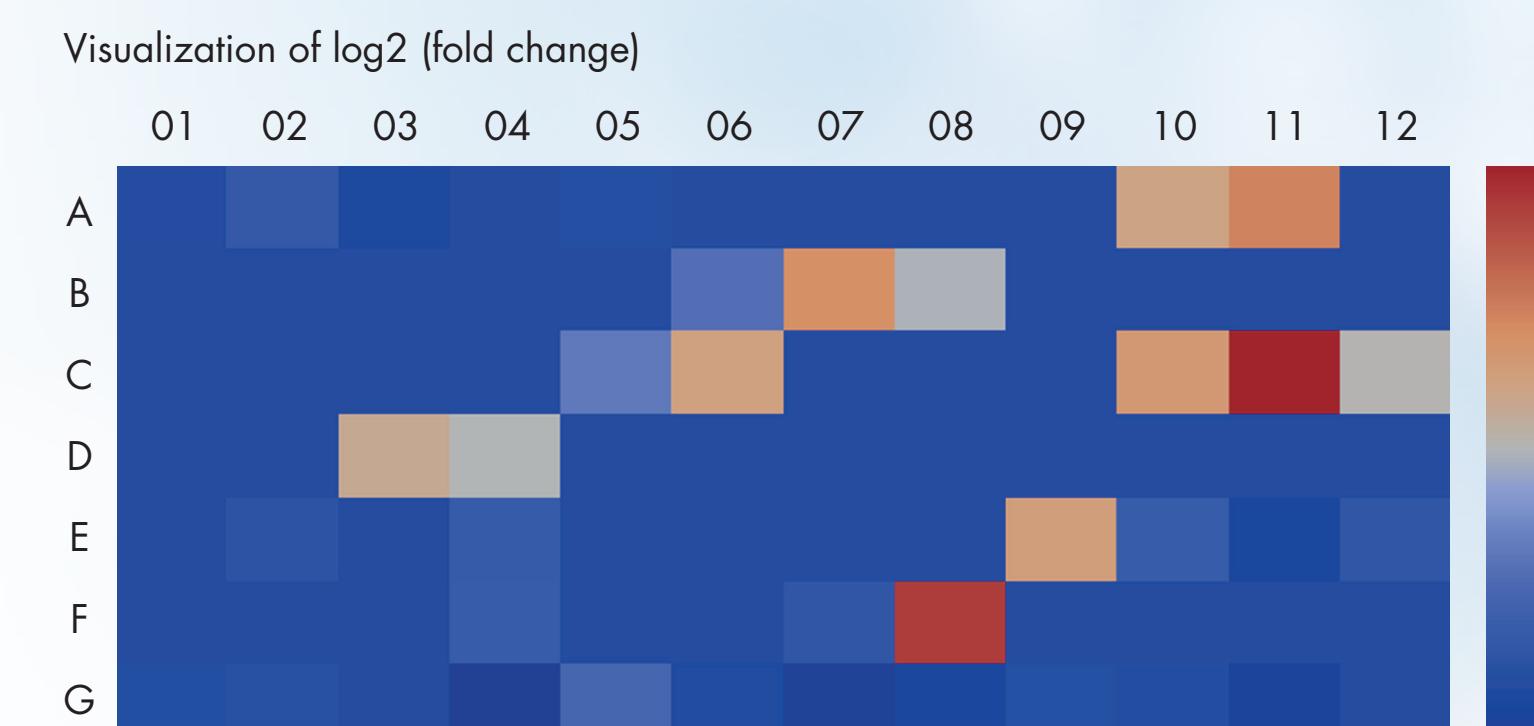
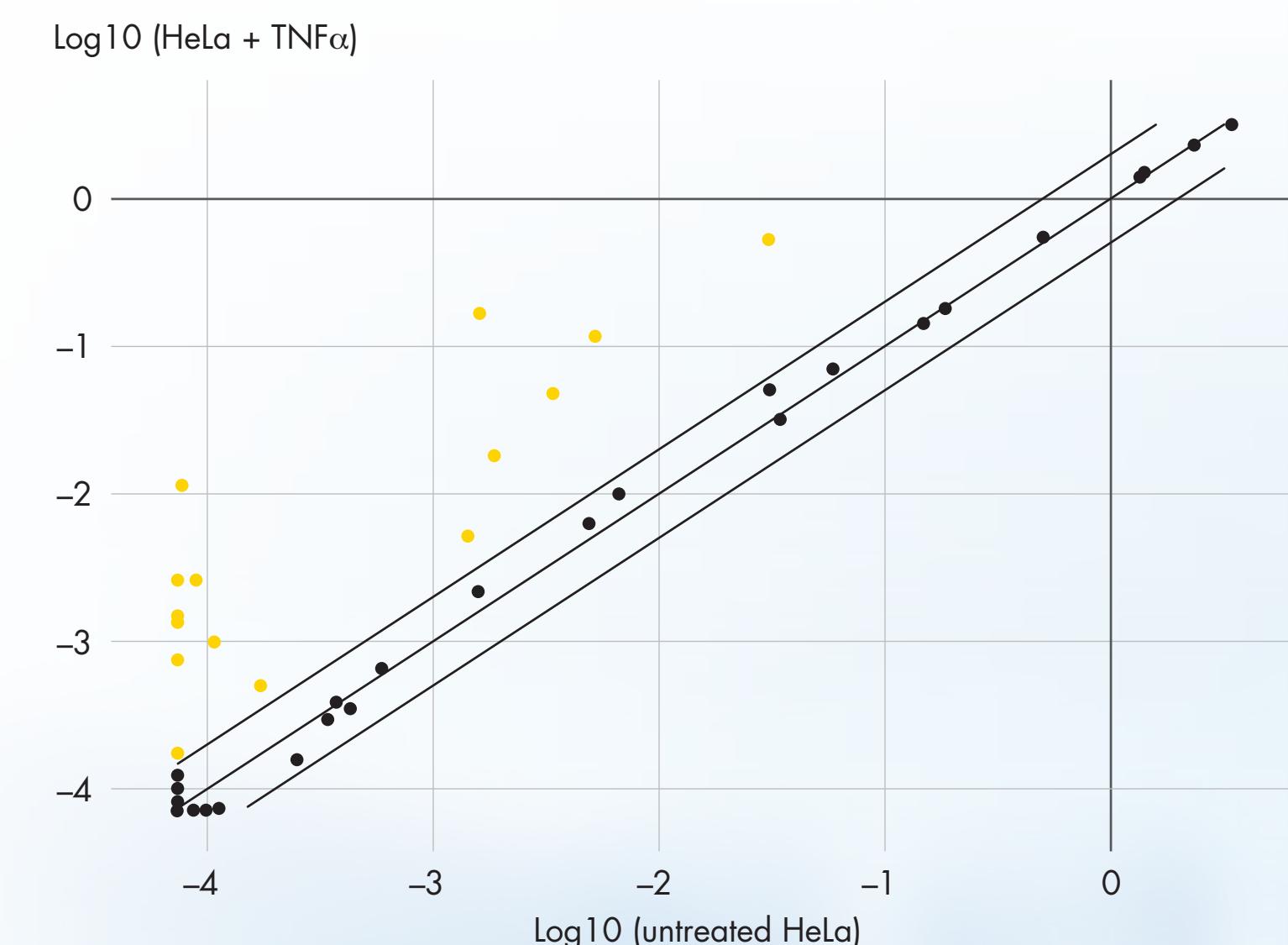
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# Robust gene expression results consistent with published biological findings

Example: QuantiNova LNA PCR Human Inflammatory Cytokines & Receptors Panel



Gene symbol	Fold Up-regulation	Reference
TNF	2,38	Brinkman, B.M.N. et al. (1999) JBC <b>274</b> , 30882-30886.
CCL5	2,91	Homma, T. et al. (2010) Int. Arch. Allergy Immunol. <b>152</b> Suppl 1, 9-17.
CSF1	3,65	Sherman, M.L. et al. (1990) J. Clin. Invest. <b>85</b> (2), 442-447.
CCL8	9,33	Secchiero, P. et al. (2005) Blood <b>105</b> (9), 3413-3419.
CXCL3	9,78	Sun, K.H. et al. (2016) J. Cell. Mol. Med. <b>20</b> (11), 2020-2028.
CXCL11	10,25	Widney, D.P. et al. (2000) J. Immunol. <b>164</b> (12), 6322-6331.
CXCL2	14,22	Rouault, C. et al. (2013) Endocrinology <b>154</b> (3), 1069-1079
CCL2	17,35	Ho, A.W. et al. (2008) Immunobiology <b>213</b> (7), 533-544.
CSF2	18,38	Sasaki, C.Y. et al. (2011) JBC <b>286</b> , 1093-1102.
IL1A	20,17	Di Paolo, N.C. et al. (2015) Immunity <b>43</b> , 1125-1136.
CXCL1	22,6	Lo, H.M. et al. (2014) Acta Pharmacol. Sin. <b>35</b> (3), 339-350.
CCL7	29,03	Thompson, W.L. and Van Eldik, L.J. (2009) Brain Res. <b>1287</b> , 47-57.
CCL20	35,63	Paradis, M. et al. (2014) J. Immunol. <b>192</b> (6), 2787-2799.
CXCL8	104,16	Perey, A.C. et al. (2015) Cell Immunol. <b>293</b> (2), 80-86.
CXCL10	151,5	Hardaker, E.L. et al. (2003) FASEB J. express 10.1096/fj.03-0170fje.

Robust quantification of gene expression changes

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	<b>Product</b>	<b>Description</b>	<b>Cat. no.</b>
Trusted QuantiNova PCR chemistry	QuantiNova SYBR® Green RT-PCR Kit (100)	QuantiNova SYBR® Green RT-PCR Master Mix, QuantiNova SYBR® Green RT Mix, Internal Control RNA, Yellow Template Dilution Buffer, ROX Reference Dye, RNase-Free Water; for 100 x 20 µl reactions	208152*
	QuantiNova Reverse Transcription Kit (10)	gDNA Removal Mix, Reverse Transcription Enzyme, Reverse Transcription Mix (containing RT primers), Internal Control RNA, RNase-Free Water; for 10 x 20 µl reactions	205410*
Complete workflow	QuantiNova SYBR® Green PCR Kit (100)	QuantiNova SYBR® Green PCR Master Mix, QuantiNova Yellow Template Dilution Buffer, QN ROX Reference Dye, Water; for 100 x 20 µl reactions	208052*
	QuantiNova LNA PCR Assay (200, 750)	Predesigned, LNA-optimized forward and reverse primers for human, mouse or rat mRNA and lncRNA; for 200 or 750 reactions	249990 249992
Best coverage for all analysis needs	QuantiNova LNA PCR Custom Assay (200, 750)	Custom designed, LNA-optimized forward and reverse primers for any human, mouse or rat mRNA and lncRNA target; for 200 or 750 reactions	249910 249911
	QuantiNova LNA PCR Reference Assay (200, 750)	Predesigned, wet-lab validated assays for common reference mRNA and lncRNA targets; for 200 or 750 reactions	249920 249921
Exceptional linearity and sensitivity	QuantiNova LNA PCR Focus Panels	Research area- and pathway-focused panels for mRNA and lncRNA; 96- or 384-well formats for any cycler	249950
	QuantiNova LNA PCR lncRNA Focus Panels	Research area- and pathway-focused panels for lncRNA; 96- or 384-well formats for any cycler	249951
Superior sensitivity	QuantiNova LNA PCR Flexible Panels	Custom-designed panel of assays from our catalog focus panels; 96- or 384-well formats for any cycler	249960
	QuantiNova LNA PCR Custom Panels	Custom-designed panel of custom and/or predesigned LNA PCR assays; 96- or 384-well formats for any cycler	249970

\*Additional kit sizes available.

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