

NGSBIO Library Quant Kit for Illumina®



- Accurate quantification
- Wide dynamic range
- Universal applications

The NGSBIO Library Quant Kit contains all the components required for accurate and sensitive quantification of libraries prepared for Illumina® NGS systems. The kit uses qPCR to specifically quantify adapter-ligated DNA molecules, ensuring optimal cluster densities for improved sequencing efficiency and quality of data.

Features

- Uses qPCR to accurately and rapidly quantify a library prior to sequencing
- Gives consistent library quantification across a wide range of sample types, concentrations, fragment sizes and GC content
- Uses a single extension time for all libraries
- Allows specific quantification of only DNA molecules that can be sequenced by NGS
- Uses antibody-mediated hot start technology to ensure all reactions start simultaneously
- Compatible with all Illumina® instruments and qPCR platforms
- Suitable for manual and automated workflows
- Easily calculate library concentration with the online NGSBIO Library Quantification Tool

Kit Contents

- qPCRBIO SyGreen Mix
- Illumina® primers
- Dilution buffer
- 5 DNA standards

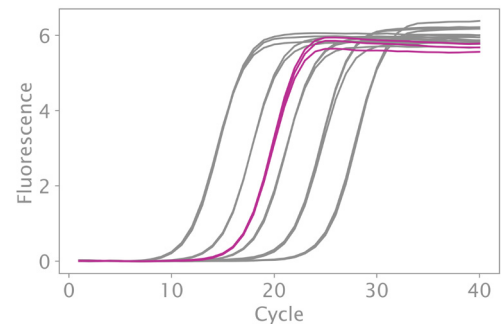


Figure 1. Amplification Curves

An adapter-ligated library sample (purple) is run alongside six standard templates (grey) provided in the NGSBIO Library Quant Kit.

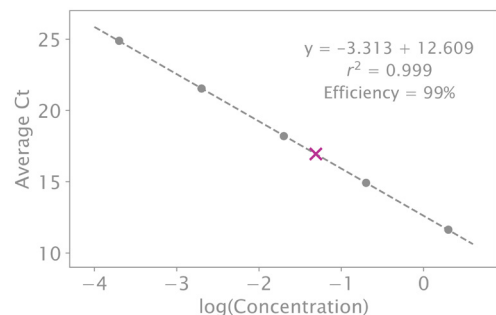


Figure 2. Standard Curve

The Cts of the amplification curves are plotted against the log of the concentration of the standard templates. A linear curve is fitted through the standards. The concentration of the unknown sample is then calculated from its position on the curve.



Accurate Library Quantification

The NGSBIO Library Quant Kit offers a reliable qPCR-based method for the quantification of libraries prepared for Illumina® NGS systems. The kit includes 5 DNA standards, primers specific to the P5 and P7 Illumina® adapter sequences and qPCRBIOSyGreen Mix. The advanced qPCR buffer system has been developed using our high-throughput smart screen technology to ensure efficient amplification of all your libraries, including those that are GC or AT-rich. The kit is also supplied with a convenient library dilution buffer.

qPCR is considered the best method for quantifying NGS libraries as it only measures adapter-bound molecules that can be used as templates for library amplification and cluster generation. The NGSBIO Library Quant Kit enables highly accurate quantification crucial for optimal cluster densities and greater sequencing efficiency.

Wide Dynamic Range

The DNA standards supplied are precisely measured and ready-to-use, covering 5 orders of magnitude from 2pM to 0.2fM. The kit is suitable for quantification of even low concentration libraries including libraries constructed without a PCR amplification step.

Universal Kit

The NGSBIO Library Quant Kit is compatible with all qPCR platforms and is optimised to give consistent and reproducible library quantification across a wide range of sample types, fragment sizes (up to 1000bp), concentrations and GC content.

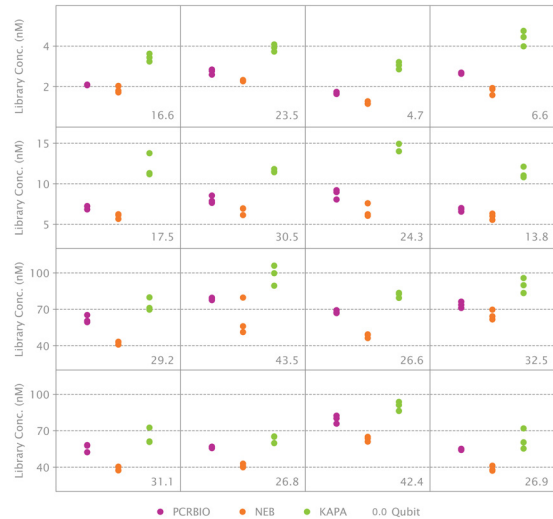


Figure 3. High consistency and reproducibility of quantification

Quantification of 16 adapter-ligated libraries using NGSBIO Library Quant Kit (purple), NEBNext® Library Quant Kit (orange) and KAPA Library Quantification Kit (green).

The NGSBIO Library Quant Kit shows less spread and greater consistency among replicates. The quantification results are within those obtained by two leading manufacturers of NGS library quantification kits. The number on the bottom right corner of each graph represents the concentration of dsDNA obtained using a Qubit Fluorometer from Invitrogen.

Cat. No.	Product Name	Pack Size	Presentation
PB71.11-01	NGSBIO Library Quant Kit for Illumina® Lo-ROX	100 Rxns	[1x1mL mix] & [1x0.2mL primers] & [1x0.6mL buffer] & [5x30µL standards]
PB71.11-05		500 Rxns	[5x1mL mix] & [1x1mL primers] & [2x1.5mL buffer] & [5x85µL standards]
PB71.12-01	NGSBIO Library Quant Kit for Illumina® Hi-ROX	100 Rxns	[1x1mL mix] & [1x0.2mL primers] & [1x0.6mL buffer] & [5x30µL standards]
PB71.12-05		500 Rxns	[5x1mL mix] & [1x1mL primers] & [2x1.5mL buffer] & [5x85µL standards]
PB71.14-01	NGSBIO Library Quant Kit for Illumina® Separate-ROX	100 Rxns	[1x1mL mix] & [1x0.2mL ROX] & [1x0.2mL primers] & [1x0.6mL buffer] & [5x30µL standards]
PB71.14-05		500 Rxns	[5x1mL mix] & [1x0.2mL ROX] & [1x1mL primers] & [2x1.5mL buffer] & [5x85µL standards]
PB71.22-05	NGSBIO DNA Standards for Illumina®	85µL Each	5 x 85µL