

ATCGGCA
TTTGGCC
CGCATCG
GACTACG

NGS

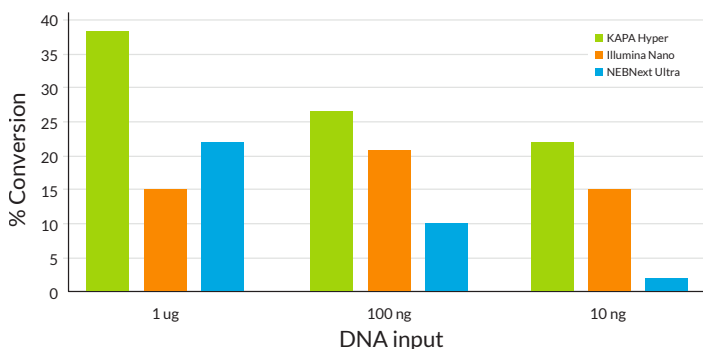
KAPA Hyper Prep Kit *for Illumina*

Higher performance. Even from FFPE.

The KAPA Hyper Prep Kit is a versatile, streamlined solution for DNA library preparation for Illumina sequencing.

The novel one-tube chemistry, optimally formulated and evolved enzymes enable higher yields of adapter-ligated library and lower amplification bias. This translates to higher library diversity, lower duplication rates and more uniform coverage, particularly for FFPE and low-input samples.

- Robust performance with inputs from 1 ng – 1 µg
- Fast, one-tube workflow (2 – 3 hours) with minimal hands-on time
- Compatible with whole genome sequencing, targeted sequencing, PCR-free workflows, FFPE and low input samples
- Contains KAPA HiFi and an optimized Library Amplification Primer Mix



Improve library yields and sequence quality

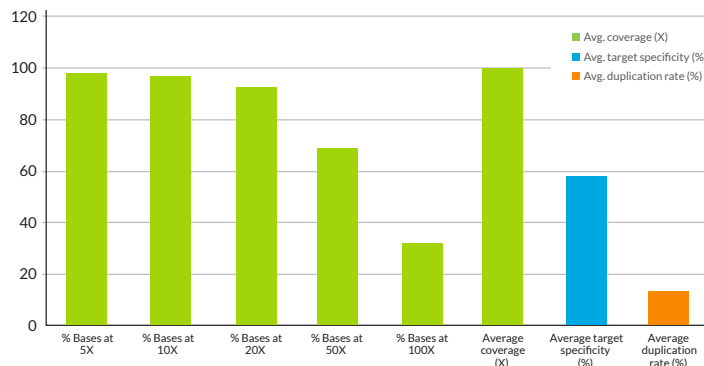
- Higher library yields translate to greater molecular complexity
- Fewer cycles of amplification with KAPA HiFi DNA Polymerase results in lower duplication rates and improved coverage

Figure 1: KAPA Hyper Prep Kits convert more input DNA to adapter-ligated library. Libraries were prepared from Covaris-sheared DNA and quantified prior to library amplification with the KAPA Library Quantification Kit. The KAPA Hyper Prep Kits achieved the highest yield of adapter-ligated library across the range of inputs (1 µg, 100 ng or 10 ng), and required fewer cycles of amplification to generate 1 µg of amplified library required for target capture.

Create high-quality libraries from FFPE samples

- Generate high-quality libraries from 250 ng FFPE DNA or less
- Significantly lower duplication rates and higher coverage

Figure 2: Sequencing metrics FFPE libraries prepared for whole exome sequencing. Libraries were prepared from 100 ng of FFPE DNA, and exome capture was performed with the SeqCap EZ HGSC VCRome Design, Roche NimbleGen. Higher library yields enabled fewer cycles of amplification, leading to significantly lower duplication rates and higher target coverage.



Workflow

Hands-on time	Total time	Step
5 min	5 min	Reaction Setup
0 min	60 min	End repair and A-tailing
0 min	15 min	Adapter ligation
15 min	30 min	SPRI cleanup
0 min	30 min	Library Amplification
15 min	30 min	SPRI cleanup
~35 min		~2.75 h

Complete library construction in less than 3 hours

- One-tube workflow with minimal cleanup steps reduces overall time, and minimizes hands-on time
- Sample-to-library in <2 hours for PCR-free workflows, or <3 hours with amplification
- Fewer handling steps lead to improved consistency and reproducibility

Figure 3: The streamlined KAPA Hyper Prep workflow. End repair, A-tailing and ligation is performed in a single tube, without intervening cleanup steps. The workflow is ideally suited for robust, high-throughput sample preparation for Illumina sequencing.

Ordering Information

Part No.	Description	Kit size
KK8500	KAPA Hyper Prep Kit	8 reactions
KK8501	KAPA Hyper Prep Kit (without amplification module)	8 reactions
KK8502	KAPA Hyper Prep Kit	24 reactions
KK8503	KAPA Hyper Prep Kit (without amplification module)	24 reactions
KK8504	KAPA Hyper Prep Kit	96 reactions
KK8505	KAPA Hyper Prep Kit (without amplification module)	96 reactions