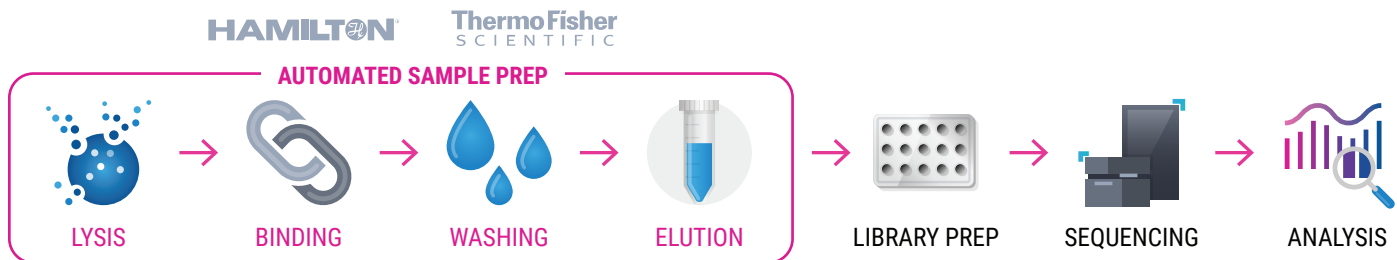


NANOBIND HIGH-THROUGHPUT HMW DNA EXTRACTION

Automate DNA extraction and optimize your sample prep workflow for HiFi sequencing

PacBio® Nanobind® HT kits enable automation of DNA extraction, the first step of an end-to-end workflow that harnesses the power of HiFi sequencing. Nanobind HT kits are designed for human/animal blood, mammalian cells, and bacteria, and are compatible with up to four robotic platforms.



Nanobind HT kits



Nanobind HT CBB kit (96 reactions) for 200 μ L human/mammalian blood (animals with nRBCs only need 2.5–20 μ L blood), cultured cells, and bacteria – **Expected HMW DNA yield:** 3–15 μ g for blood and cultured mammalian cells and 2–10 μ g for bacteria

Nanobind HT 1 mL blood kit (96 reactions) for 1 mL human blood – **Expected HMW DNA yield:** 3–70 μ g

An automated solution

Nanobind HT kits use magnetic disk processing to automate lysis, binding, washing and elution steps and are compatible with instruments from Hamilton and Thermo Fisher.

Hamilton NIMBUS Presto is a walkaway solution with automated plate filling. Thermo Fisher KingFisher instruments are semi-automated with manual plate filling and limited user interaction during the run.

Sample	Input material	DNA yield	DNA mode size	HiFi mean read length	HiFi yield
Whole human blood	200 μ L	4.5 μ g	135 kb	18,109 bp	92 Gb
Whole human blood	1 mL	28.4 μ g	114 kb	15,132 bp	102 Gb
Mammalian cultured cell (HG001)	1 \times 10 ⁶ cells	5.9 μ g	86 kb	17,393 bp	105 Gb
Bovine blood	200 μ L	15 μ g	50 kb	15,988 bp	106 Gb
Chicken blood (nucleated red blood cell)	2.5 μ L	11.5 μ g	137 kb	16,384 bp	98 Gb
Bacteria G ⁻ , <i>E. coli</i>	5 \times 10 ⁸ cells	5 μ g	106 kb	8437 bp*	67 Gb*
Bacteria G ⁺ , <i>L. monocytogenes</i>	5 \times 10 ⁸ cells	8 μ g	122 kb		

* Microbial samples were multiplexed and DNA sheared to 8 kb according to recommendation. Other samples were sheared to 15–18 kb.

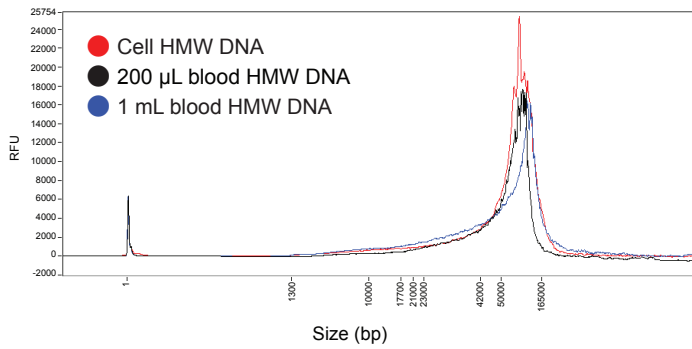


Figure 1. HMW DNA size distribution extracted with Nanobind HT kits with the KingFisher Apex instrument on the Femto Pulse system (Agilent technologies).

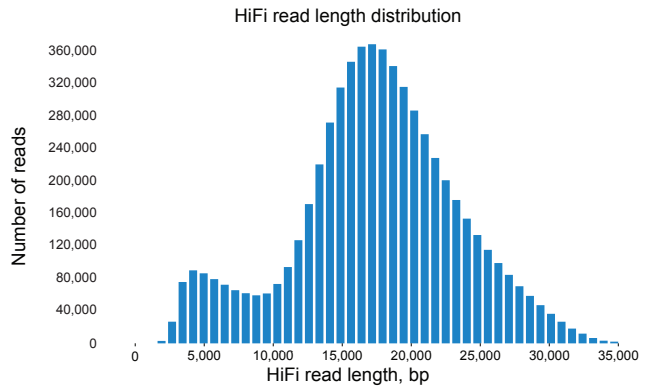


Figure 2. HiFi read length distribution for HG001 cell sample extracted with the Hamilton NIMBUS Presto system.

Automation system	Instrument design	Supported samples with available script	Sample per run	Hands-on time	Total time
Hamilton NIMBUS Presto	Robotic liquid handler with integrated KingFisher Presto sample purification system	Human blood (200 µL and 1 mL), animal blood (mammalian and non-mammalian), mammalian cell, and bacteria	24 to 96	20 minutes	~2 hours, 30 minutes
KingFisher Apex	Benchtop sample purification system with touch screen	Human blood (200 µL and 1 mL), animal blood (mammalian and non-mammalian), mammalian cell, and bacteria	24 to 96	45 minutes	~2 hours
KingFisher Flex	Benchtop sample purification system	Human blood (200 µL and 1 mL), and mammalian cell	24 to 96	45 minutes	~2 hours
KingFisher Duo Prime	Compact benchtop sample purification system	Human blood (200 µL and 1 mL), and mammalian cell	6 to 12	15 minutes	<2 hours



Ordering information

Nanobind HT CBB kit – PN 102-762-700
 Nanobind HT 1 mL blood kit – PN 102-762-800
 Protocol info – Nanobind HT HMW DNA extraction – robotic procedures



Connect with PacBio

North America: nasales@pacb.com
 South America: sasales@pacb.com
 EMEA: emea@pacb.com
 Asia Pacific: apsales@pacb.com

Research use only. Not for use in diagnostic procedures. © 2024 Pacific Biosciences of California, Inc. ("PacBio"). All rights reserved. Information in this document is subject to change without notice. PacBio assumes no responsibility for any errors or omissions in this document. Certain notices, terms, conditions and/or use restrictions may pertain to your use of PacBio products and/or third-party products. Refer to the applicable PacBio terms and conditions of sale and to the applicable license terms at pacb.com/license. Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, SBB, Revio, Onso, Apton, and Kinnex are trademarks of PacBio.