

# HyperCap Products and Workflow

Fully integrated sample prep solution

## STREAMLINED WORKFLOW

HyperCap Products and Workflow create a streamlined, automation-friendly solution that integrates Roche's high efficiency KAPA DNA library preparation kits with SeqCap EZ (Exome and Custom) target enrichment probes. The HyperCap Workflow v2.0, which also includes KAPA Dual-Indexed (96) Adapters and Roche's Universal Blocking Oligos, allows users to input a variety of sample amounts and sample types.

### Benefits

- Convenient and seamless target enrichment workflow for a fully integrated sample prep solution
- Easy-to-use and less complex workflow enabled by Roche Universal Blocking Oligos (UBOs) complexities
- Supporting high-throughput workflows through qualified automation capabilities and validated KAPA Dual-Indexed (96) Adapters
- Customizable for a variety of sample types and starting input amounts
- Single vendor ordering process with streamlined service and support

## Introducing the HyperCap Workflow v2.0

The HyperCap Workflow uses many of the same reagents as existing Roche target enrichment workflows, but with two notable improvements:

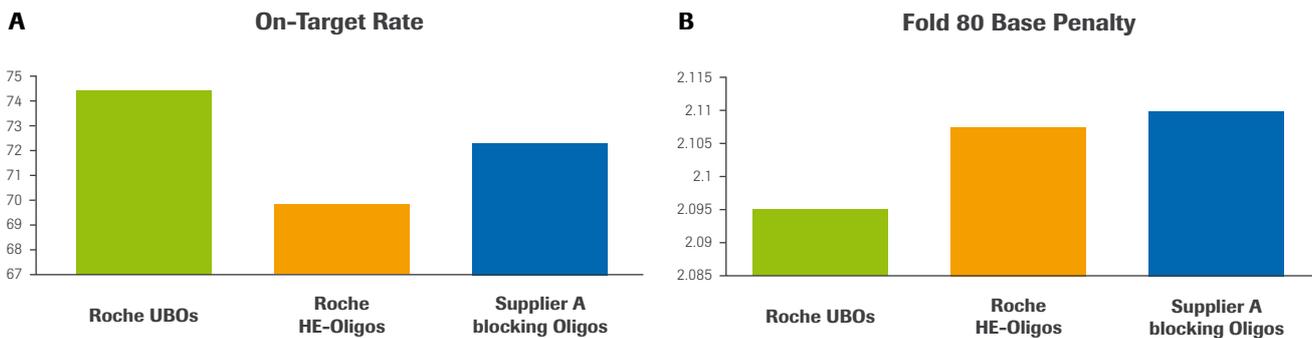
- **UBOs:** Eliminates the need for adapter-matched blocking oligos, which reduces hands-on time and complexity
- **Validation with KAPA Dual-Indexed (96) Adapters:** Enables greater multiplexing by utilizing up to 96 sample barcodes



#	Step	SeqCap EZ v5.1	HyperCap v1.0	HyperCap v2.0
1	Library construction chemistry	KAPA HTP/LTP Kit	KAPA HyperPrep or HyperPlus Kit	KAPA HyperPrep or HyperPlus Kit; SeqCap Adapter A/B Kits, KAPA Dual-Indexed (96) Adapters
2	DNA binding to SPRI beads (cleanups)	15 min	5 min	5 min
3	Hybridization setup	Dry-down	Bead-based	Bead-based; UBO
4	Volume of capture beads	100 µL	50 µL	50 µL
5	Vortex during capture	Yes	No	No
6	Bead capture time	45 min	15 min	15 min
7	Bead wash volume (tube)	200 µL (1.5 mL tube)	200 µL (PCR tube/plate)	200 µL (PCR tube/plate)
8	Bead wash parameters	Vortex mixer and water bath needed	No vortex or water bath required	No prolonged vortex or water bath required
9	Post-capture LM-PCR	2 x 50 µL reactions, 14 cycles	Single 50 µL reaction, 14 cycles	Single 50 µL reaction, 14 cycles

## Feel the difference with Roche UBOs

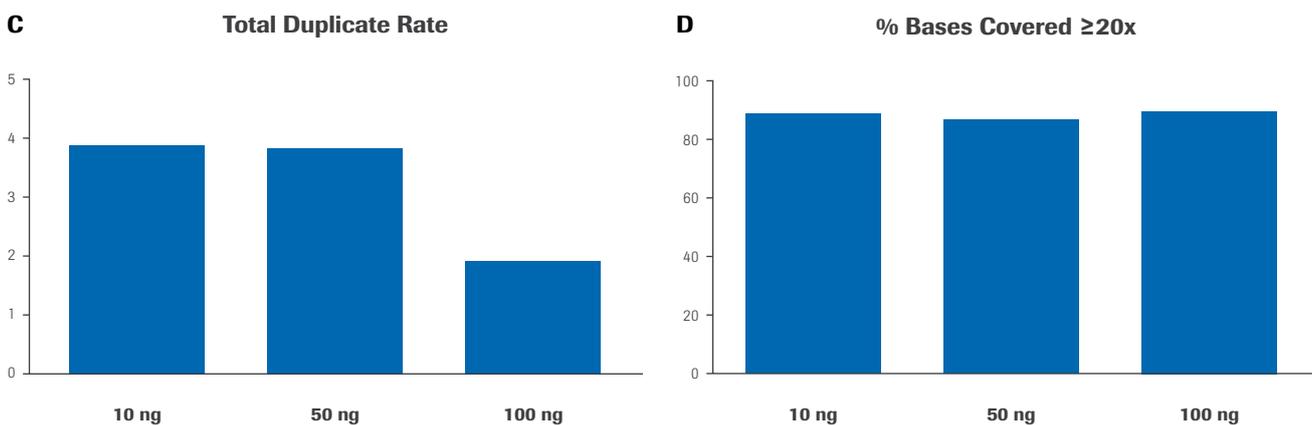
- Roche's UBO Kit can be used to block 6- and 8-base barcoded adapters, and is amenable for single- or dual-indexing strategies
- Roche UBOs demonstrated equal or better performance than Supplier A's blocking oligos while maintaining uniformity of capture



Performance metrics comparing Roche UBOs, Roche HE-Oligos and Supplier A's blocking Oligos using Coriell samples with the SeqCap EZ Human Oncology Panel, KAPA HyperPrep Kit KAPA Dual-Indexed (96) Adapters and the HyperCap Workflow v2.0.

## Customizable for your sample needs

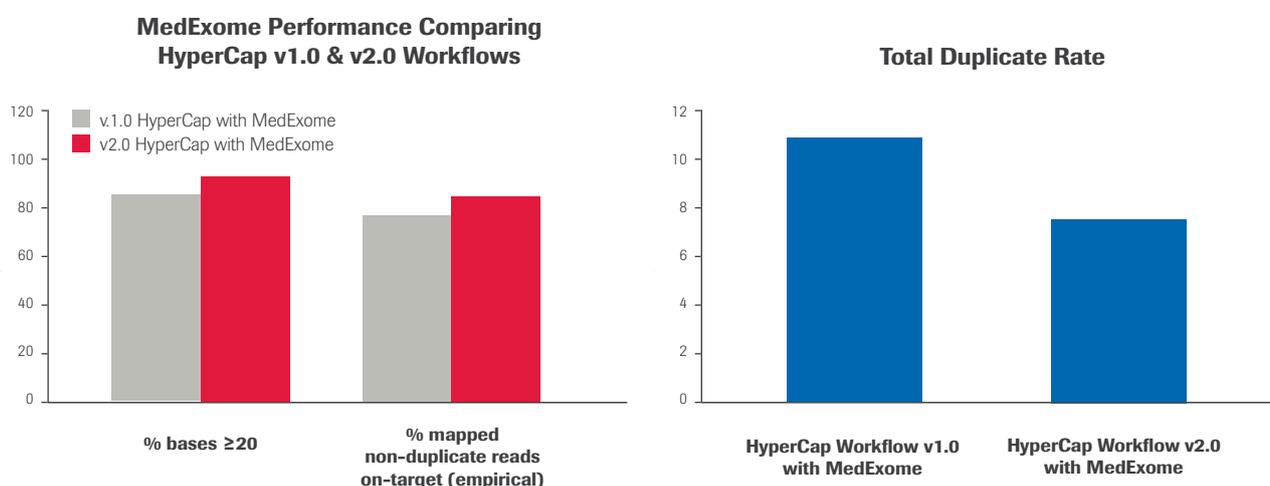
- Validated with KAPA HyperPrep and HyperPlus kits
- KAPA HyperPlus Kits provide higher efficiency in library prep process when using lower input amounts
- Higher coverage is obtained with low duplicate rates **(C) (D)**



Performance metrics using libraries prepared with 10 ng, 50 ng and 100 ng DNA input with Coriell samples using the SeqCap EZ Human Oncology Panel and the KAPA HyperPlus Kit.

## Enhanced performance of MedExome with HyperCap Workflow v2.0

- Higher % base coverage at >20x depth with the HyperCap Workflow v2.0 compared to HyperCap Workflow v1.0
- Higher on-target read rate and lower total duplicate rate with the HyperCap Workflow v2.0 compared to HyperCap Workflow v1.0 (as shown below)



Performance metrics for a Coriell sample using SeqCap EZ MedExome Probes with the KAPA HyperPlus Kit and the HyperCap Workflow v1.0 & v2.0.

## HyperCap Workflow v2.0 product offering

The HyperCap Workflow v2.0 enables customers to obtain all library prep and enrichment reagents and support from a single vendor.

Workflow step	Product	Pack sizes
Library Prep	KAPA HyperPrep Kit KAPA HyperPlus Kit <i>High efficiency library prep using mechanical or enzymatic shearing</i>	8,24 and 96 reactions
Enrichment Reagents	HyperCap Target Enrichment Kit <i>Reagents for hybridization, wash, and amplification steps, including <b>universal blocking oligo</b></i>	24 and 96 reactions
Adapters	SeqCap Adapter Kit A and B <i>Barcoded adapters for multiplexed sequencing.</i> <b>KAPA DI Adapters</b> are validated for the HyperCap v2.0 workflow, offering up to 96 unique sample barcodes.	Multiple
Beads	HyperCap Bead Kit <i>Capture and selection/purification beads</i>	24 and 96 reactions
Probes	SeqCap EZ Probes <i>Catalog or custom EZ probe pools</i>	4 - 960 reactions

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Published by:

**Roche Sequencing Solutions, Inc.**  
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Pleasanton, CA 94588

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SEQ100025 A071 10/17