# CASE **STUDY**

Empowering you to provide medically relevant information through development of a customized workflow.

# **Overview**

A collaboration between a customer and Roche to develop a single-tube, high-throughput, streamlined workflow for targeted NGS of both DNA and RNA from clinical FFPE tissue samples.

# Challenges

- Limited amounts of sample required a combined, single-tube workflow for both DNA and RNA library prep
- Custom formulation and workflow optimization were required for total nucleic acid library preparation
- Requirement for cross-validation of variants demanded development of a unique targeted panel covering RNA targets, exome regions, and other custom targets

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# Approach

Roche Support Network worked with the customer to identify their needs, develop an automated workflow, and test the resulting custom formulations.

Roch

Custom kitting provided optimization of reagents. Periodic review of customer results followed by additional recommendations helped to optimize the workflow and improve performance.

The Roche Expert Design Team worked with the customer to design a unique probe panel and a streamlined hybrid capture workflow that reduced overall turnaround time.



Roche worked with the customer's R&D team to validate and transfer the workflow into production, then helped their Quality team with required documents.

# Result

Creation of a unique custom kit and custom targeted panel and establishment of a complete streamlined workflow at the customer site.

# Products to support the development of custom kits, reagents, and workflows



# **DNA library preparation**

- KAPA HyperPrep Kits for mechanically fragmented DNA
- KAPA EvoPlus Kits with enzymatic fragmentation

# **RNA library preparation**

KAPA RNA HyperPrep Kits for:

- Whole-transcriptome or mRNA sequencing
- Depletion of rRNA, globin, or custom targets



# Custom,complimentary automation solutions

- Validated scripts for many common liquid handlers
- On-site installation and support of methods

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# Target enrichment of RNA and DNA

KAPA HyperCap Target Enrichment Probes for hybridization-based workflows

KAPA HyperPETE for Primer Extension Target Enrichment

HyperDesign for online design of your own custom panels

## Accessory workflows and reagents

**KAPA Library Amplification Kits** 

KAPA Pure Beads and KAPA HyperPure Beads for cleanup

KAPA Library Quantification Kits

KAPA NGS Adapters, with or without UMIs



To discover how you can benefit from custom NGS workflows, visit: **sequencing.roche.com/custom**