

AVENIO Tumor Tissue Targeted Kit V2

Tumor Profiling: Guideline-driven biomarkers



The AVENIO Tumor Tissue Targeted Kit V2 is a next-generation sequencing (NGS) tumor profiling research assay for identifying genomic aberrations in solid tumors. This assay contains **17 genes**, including those in the U.S. National Comprehensive Cancer Network (NCCN) Guidelines.¹



Benefits

- Confidently report all four mutation classes- SNVs, indels, fusions and CNVs - from just 20 ng of amplifiable DNA.²
- Delivers exceptional analytical performance supported by enzymatic error suppression and molecular barcodes.²
- Analyze tumor tissue from a variety of solid tumor types using a single optimized DNA workflow for up to 24 samples at a time.
- Rely on a single trusted supplier for complete support of your DNA isolations, library prep, and target enrichment.
- Receive a complete solution with the required reagents, a robust bioinformatics pipeline and software for analysis and reporting to keep your lab at the forefront of cancer research.[†]

Research focus

Lung, Colorectal, Breast, Gastric, Glioma, Melanoma, Ovarian, Thyroid and Pancreatic

Applications

- Comprehensive genomic profiling of tumor tissue
- Detection of resistance biomarkers

Analytical metrics²

Mutation Class	SNVs		Indels		Fusions		CNVs	
Mutant Allele Frequency /Copy Number	5%		5%		5%			
Sensitivity and PPV	Sensitivity	PPV	Sensitivity	PPV	Sensitivity	PPV	Sensitivity	PPV
	>99%	>99%	>99%	>99%	>99%	>99%	SD	>99%

SD: Sample dependent
 Samples: FFPE tissue curls/sections,
 DNA input: ≥20 ng of FFPE DNA,
 total DNA amount for each sample
 determined by input QC.

Sensitivity and Positive Predictive Value (PPV) metrics based on observed product performance. Sensitivity and PPV performance reported per variant. Sensitivity was determined using commercially available reference samples containing verified mutations at the stated allele frequencies. SNV performance is panel wide. Indel, Fusion and CNV performance based on whitelist variants. AVENIO Tumor Tissue Analysis Kits V2 achieve >99.99% per base specificity across each of the panels. Stated performance requires at least 20 million reads per sample for Targeted, Expanded and Surveillance Kits V2. Sequencing performed on an Illumina® NextSeq™ 500/550/550Dx instrument.

For Research Use Only. Not for use in diagnostic procedures.

Specifications

Panel size	81 kb
Sample size	2x10 µm FFPE curls/sections
DNA input*	20 ng of amplifiable DNA

Reactions per kit	24
Turn-around time	5 days from extraction to results

* Total DNA amount for each sample was determined by input QC.

Assay targets

Gene	Seq Target	SNV	Indel [†]	Fusion ^{**}	CNV ^{**}
ALK	Selected Regions	▪	▪	▪	
APC	Selected Regions	▪	▪		
BRAF	Selected Regions	▪	▪		
BRCA1	All Coding Regions	▪			
BRCA2	All Coding Regions	▪			
DPYD	Selected Regions	▪			
EGFR	All Coding Regions	▪	▪		▪
ERBB2	All Coding Regions	▪	▪		▪
KIT	Selected Regions	▪	▪		

Gene	Seq Target	SNV	Indel [†]	Fusion ^{**}	CNV ^{**}
KRAS	All Coding Regions	▪			
MET	All Coding Regions	▪	▪		▪
NRAS	Selected Regions	▪			
PDGFRA	Selected Regions	▪			
RET	Selected Regions	▪		▪	
ROS1	Selected Regions	▪		▪	
TP53	All Coding Regions	▪	▪		
UGT1A1 ^{***}	Selected Regions	▪			

All coding regions are based on the longest transcript from Ensembl build 82.

[†] Indels are limited to variants in a pre-specified list of positions, referred to as "Loci of Interest", except for EGFR exon 19 long deletions, EGFR exon 20 long insertions and MET long insertions, which are not restricted to a pre-defined set of Indels.

^{**} Detection of Fusions and CNVs are limited to variants in a pre-specified list of positions, referred to as "Loci of Interest" in the AVENIO analysis software.

^{***} UGT1A1*28 allele sequenced but not currently called by the AVENIO analysis software.

AVENIO family of NGS Oncology Assays

AVENIO Tumor Tissue Targeted Kit V2 is a part of the AVENIO family of NGS oncology research assays that include three tumor tissue and three corresponding ctDNA assays. By using the wider family of AVENIO assays, labs can obtain detailed molecular findings across all four mutation classes from tissue or plasma samples.

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For more information about the AVENIO Tumor Tissue Analysis Kits, please visit our website or contact your local Roche Sequencing representative.

***Required hardware:** Illumina® NextSeq™ 500/550/550Dx and Roche Oncology Analysis Server. NextSeq™ 500/550/550Dx instruments and associated sequencing reagents are manufactured and sold by Illumina and are not supplied by Roche.

1. National Comprehensive Cancer Network. <http://www.nccn.org>. August 2, 2023.
2. Data on file with Roche.

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