

Oncology

AcroMetrix Oncology Hotspot Control

Quality controls for somatic mutation detection by NGS

Thermo Scientific™ AcroMetrix™ Oncology Hotspot Control is a highly multiplexed quality control to assess performance of next-generation sequencing (NGS) assays that detect somatic mutations.



Multiple variant types

to capture the diversity of somatic cancer mutation types



500+ clinically relevant variants

allow detection of multiple targets with NGS in a single reaction



IVD labeled

enables use in clinical diagnostics



Variant frequency near LOD

for test method development and validation

Next-generation sequencing quality control

Against a highly characterized genomic background, we added over 500 SNPs, insertions, and deletions of varying lengths and complexities. The different mutation types allow a lab to use this control with various next-generation sequencing platforms, including their custom library preparation panels.

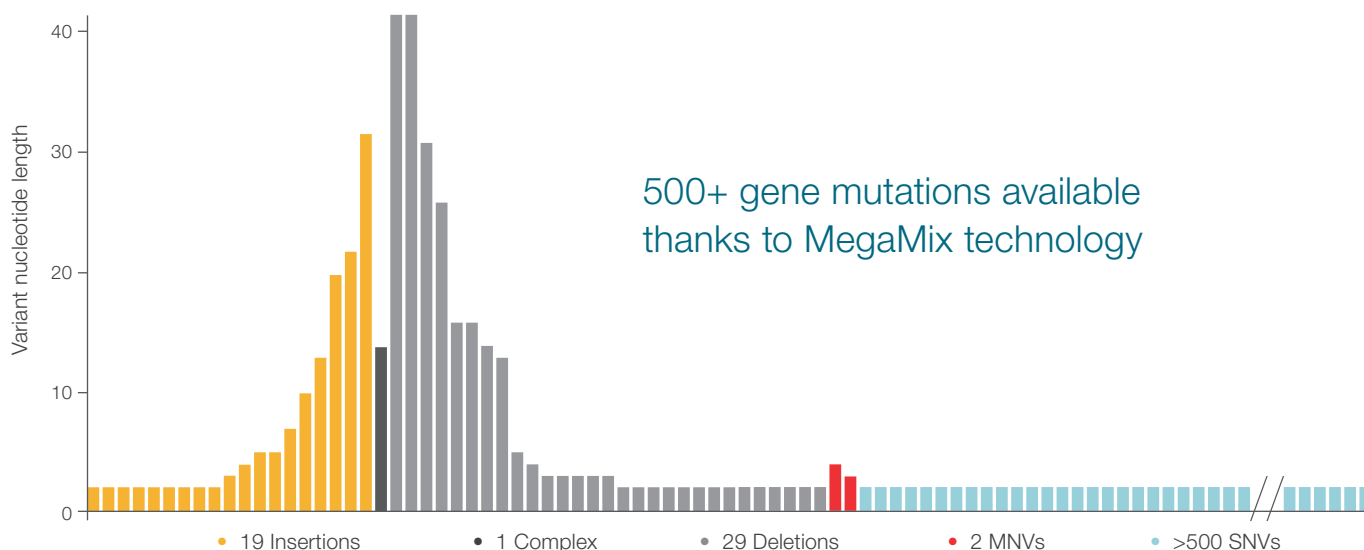
- Find variants of interest among >500 COSMIC mutations
- Gain certainty near the limit of detection (5–35% frequency*)
- Eliminate the hassle of sourcing, characterizing and maintaining inventory of cell line mixes
- Lot-to-lot consistency following ISO 17511 metrological traceability practices
- Produced in cGMP facilities in accordance to ISO 13485

AcroMetrix Hotspot Frequency Ladder

A NGS validation ladder featuring 555 hotspots representative across various cancers at varying tumor burden levels. For use in analytical validation of various oncology NGS assays.

Learn more at thermofisher.com/frequency-ladder

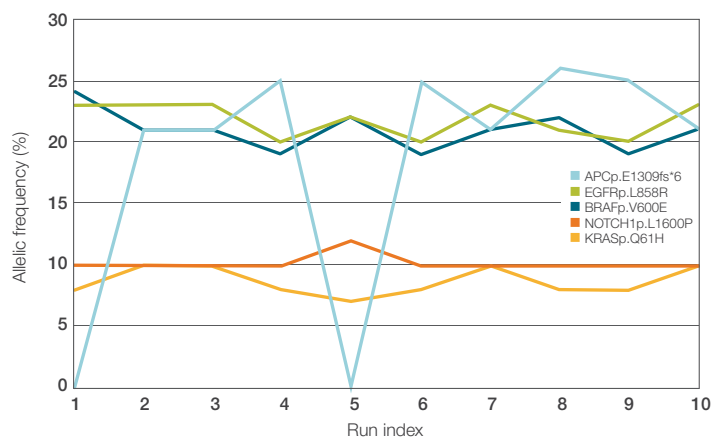
Track multiple variant types of varying nucleotide lengths



Fifty-three genes are represented

ABL1	CTNNB1	FLT3	JAK2	NOTCH1	SMARCB1
AKT1	EGFR	FOXL2	JAK3	NRAS	SMO
ALK	ERBB2	GNA11	KDR	PDGFRA	SRC
APC	ERBB4	GNAQ	KIT	PIK3CA	STK11
ATM	EZH2	GNAS	KRAS	PTEN	TP53
BRAF	FBXW7	HNF1A	MET	PTPN11	VHL
CDH1	FGFR1	HRAS	MLH1	RB1	MAP2K1
CDKN2A	FGFR2	IDH1	MPL	RET	NPM1
CSF1R	FGFR3	IDH2	MSH6	SMAD4	

Track multiple variants over time



Factors such as local GC content and sequence complexity may affect detection of one variant differently from detection of another variant on the same targeted gene panel. A multiplex control enables routine QC monitoring of multiple variants across runs.

* Laboratory is responsible for establishing its own expected results

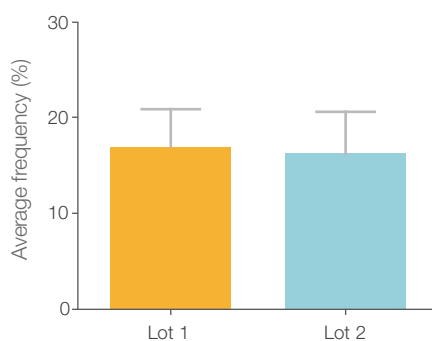
Tested on multiple platforms

	Ion AmpliSeq™ Cancer Hotspot Panel v2	Illumina® TruSeq® Amplicon Cancer Panel	Illumina® TruSight® Tumor Panel
SNVs	397	364	241
Insertions	9	11	10
Deletions	15	17	15
MNVs	2	2	1
Complex	1	1	—

Summary data show distribution of variant types detected by three different panels. Additional variants may be present. Each lab is responsible for establishing its own expected results.

Consistent lot-to-lot performance

In multiple runs completed in different laboratories, average frequency of detected variants were consistent between lot 1 and lot 2.



Manufactured using MegaMix Technology

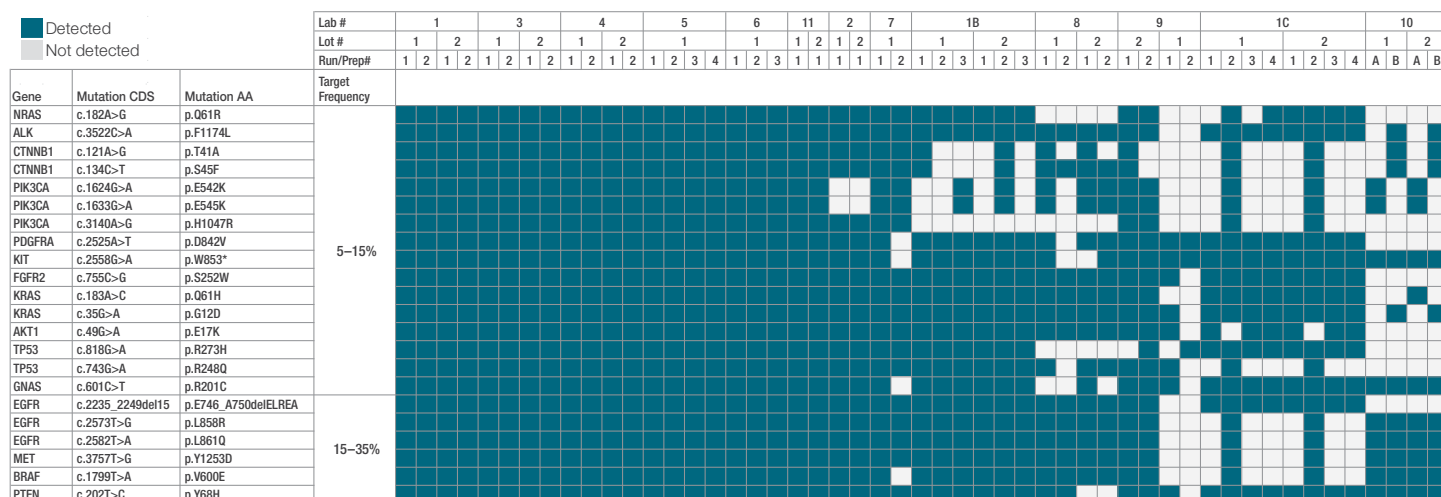
Thermo Scientific™ MegaMix™ Technology is a proprietary high-multiplex blending process. The AcroMetrix Oncology Hotspot Control contains:

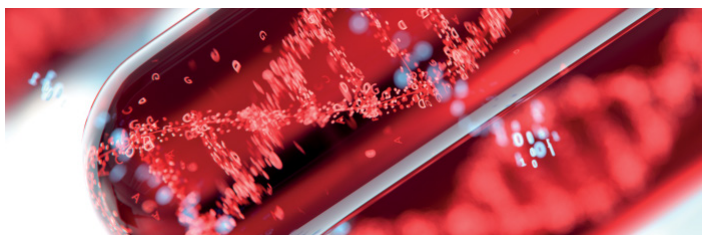
- Synthetic and genomic DNA with synthetic variants confirmed by Sanger sequencing*
- Built on the NIST Genome in a Bottle GM24385, one of the most highly characterized genomes in the world
- Predictable, reliable performance that simplifies your QC

* Genomic variants in MegaMix not confirmed by Sanger sequencing

Detection of 22 selected variants

Even within the same lab, results varied across runs. The usage of a common control material enables comparisons across multiple variables such as different operators, platforms, and bioinformatics pipelines.

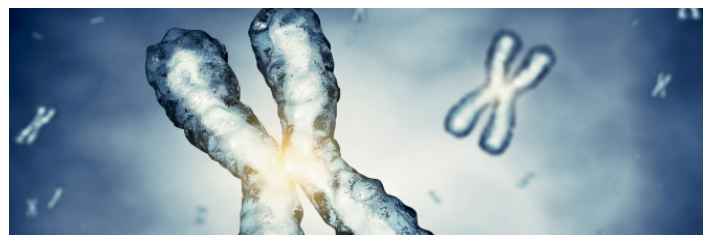




Thermo Scientific AcroMetrix Multi-Analyte ctDNA Plasma Controls

- Third-party controls for monitoring liquid biopsy assays
- Platform-agnostic reference material will help you standardize your ctDNA research endeavors

Learn more at thermofisher.com/ctDNA



Thermo Scientific AcroMetrix BCR-ABL Panel

- World's first independent full-process control solution for the analytical evaluation of BCR-ABL test methods
- Expanded dynamic range allows you to monitor assay performance over the whole measuring range

Learn more at thermofisher.com/bcr-abl

Thermo Scientific AcroMetrix oncology quality controls and panels

Catalog #	Product Name/Description	VAF	Vial Fill Volume	Package Size	Regulatory Designation
Solid tumors					
969056	AcroMetrix Oncology Hotspot Control		25 µL	3 vials	CE-IVD, IVD
10026229	AcroMetrix Hotspot Frequency Ladder		30 µL	7 vials	RUO
10024431	AcroMetrix Core Hotspot-CNV DNA Control		8 µL	8 vials	RUO
10024432	AcroMetrix Core Fusion RNA Control		8 µL	8 vials	RUO
BCR-ABL					
956980	AcroMetrix BCR-ABL Panel		1 x 10 ⁶ cells	5 vials	RUO
Liquid Biopsy					
957563	AcroMetrix Multi-Analyte ctDNA Plasma Control A	1%	2 ml	1 vial	RUO
957564	AcroMetrix Multi-Analyte ctDNA Plasma Control B	0.5%	2 ml	1 vial	RUO
957565	AcroMetrix Multi-Analyte ctDNA Plasma Control C	0.25%	2 ml	1 vial	RUO
957566	AcroMetrix Multi-Analyte ctDNA Plasma Control D	0.01%	2 ml	1 vial	RUO
957567	AcroMetrix Multi-Analyte ctDNA Plasma Control E	0%	2 ml	1 vial	RUO

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Contact us to learn about our custom capabilities

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