



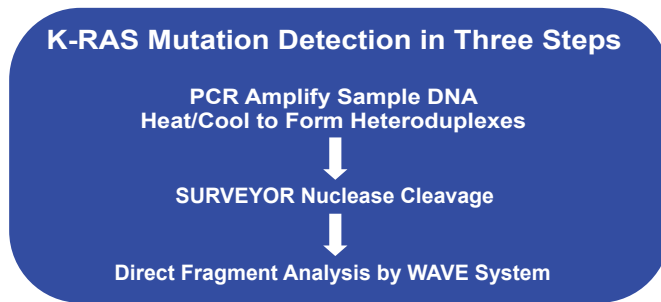
SURVEYOR® Scan K-RAS Mutation Detection Kit for WAVE® HS Systems

Numerous scientific studies report that K-RAS mutation status is a strong predictor of resistance to cancer treatment with epidermal growth factor receptor inhibitors. The SURVEYOR Scan K-RAS Kit uses established SURVEYOR Nuclease technology to detect mutations in the K-RAS gene that can be used to identify drug-resistant tumors.

Key Features

- Identifies all known and unknown mutations in both K-RAS coding exons 2 and 3 (codons 12, 13 and 61)
- High analytic sensitivity — detects 1% of K-RAS mutant in a background of wild-type genomic DNA
- Finds low level mutations frequently missed by sequencing

Easy To Use



Easy To Interpret

Transgenomic designed the SURVEYOR Scan K-RAS Kit for simple discrimination between mutations in codon 12 and 13. Figures 1 and 2 demonstrate that the analytic sensitivity of SURVEYOR Scan in limit of detection titration experiments is approximately 1%. In addition, the figures illustrate how codon 12 mutations yield a single peak of SURVEYOR Nuclease cleavage products, whereas codon 13 mutations yield a double peak, making identification of both the presence and the position of exon 2 mutations very simple.

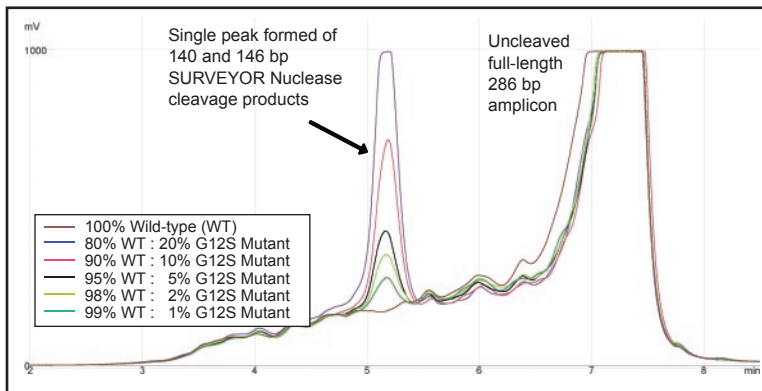


Figure 1. SURVEYOR Scan K-RAS Kit Titration of the K-RAS Exon 2 G12S Mutation — Gly (GGT) to Ser (AGT)

Mutation detection was performed by mixing of K-RAS exon 2 wild-type and G12S mutant amplicons in the ratios indicated, heating and cooling to form heteroduplexes followed by cleavage with SURVEYOR Nuclease. The resulting products were analyzed on the WAVE 4500 HT HS System. Because the G12S mutation is located near the center of the exon 2 amplicon, the two SURVEYOR Nuclease cleavage products have very similar retention times and form a single peak. Note that the majority of the amplicon mix consists of wild-type homoduplexes, which are not cleaved by SURVEYOR Nuclease. Limit of detection of the G12S mutant amplicon is 1%.

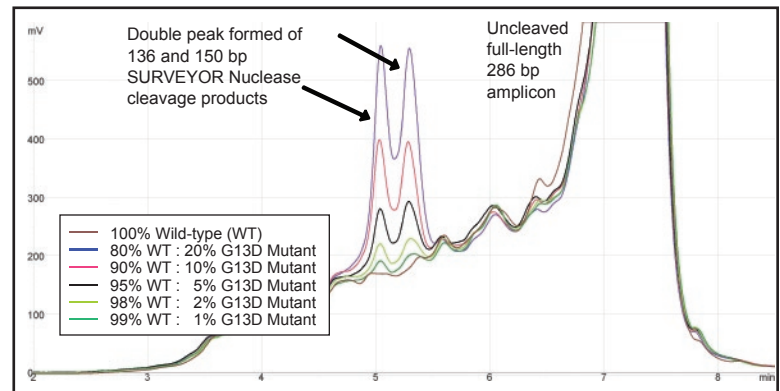


Figure 2. SURVEYOR Scan K-RAS Kit Titration of the K-RAS Exon 2 G13D Mutation — Gly (GGC) to Asp (GAC)

Mutation detection was performed by mixing of K-RAS exon 2 wild-type and G13D mutant amplicons in the ratios indicated, heating and cooling to form heteroduplexes followed by cleavage with SURVEYOR Nuclease. The resulting products were analyzed on the WAVE 4500 HT HS System. Because the G13D mutation is further from the center of the exon 2 amplicon than the G12S mutation (see Figure 1); the two SURVEYOR Nuclease cleavage products have different retention times and form a double peak. Note that most of the amplicon mix consists of wild-type homoduplexes, which are not cleaved by SURVEYOR Nuclease. Limit of detection of the G13D mutant amplicon is 1-2%.

Cost Effective

By batching five samples at a time, you can double the number of samples tested in each kit.

Samples per Run	Control + Samples	Samples/Run	Total Runs per Kit (100/Number of Samples)	Samples Tested per Kit
1	5 + 2	7	14	14
2	5 + 4	9	11	22
3	5 + 6	11	9	27
4	5 + 8	13	7	28
5	5 + 10	15	6	30

SURVEYOR Scan K-RAS Mutation Detection Kit Contents

- DNA Polymerase 2.5 U/μL
- 10X Reaction Buffer
- dNTPs, 10 mM
- K-RAS Primer forward Exon 2, 10 μM
- K-RAS Primer reverse Exon 2, 10 μM
- K-RAS Primer forward Exon 3, 10 μM
- K-RAS Primer reverse Exon 3, 10 μM
- SURVEYOR Nuclease W
- SURVEYOR Enhancer W2
- SURVEYOR Enzyme Cofactor
- SURVEYOR Stop Solution
- MgCl₂ Solution 0.15 M
- K-RAS Control Plasmid (wild-type exon 2)
- K-RAS Control Plasmid (wild-type exon 3)
- K-RAS Positive Control, Codon 12
- K-RAS Positive Control, Codon 13
- K-RAS Positive Control, Codon 61
- User Guide

Product

SURVEYOR Scan K-RAS Kit for WAVE HS Systems

Quantity
100 reactions

Catalog No.
710100

Shipping and Storage

SURVEYOR kits are shipped frozen. Store kits at -20 °C in a non-frost-free freezer. The SURVEYOR Scan K-RAS Kit is guaranteed for a period of 6 months if stored as directed.

Quality Control

Every component has met Transgenomic quality control standards.



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