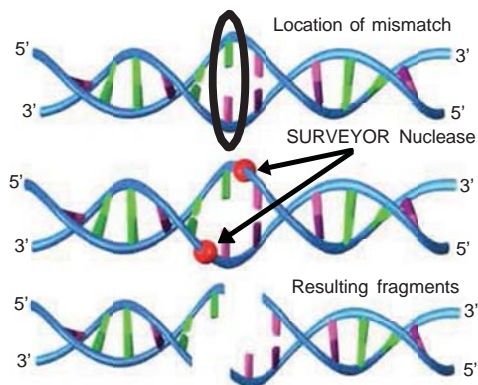


Surveyor[®] Mutation Detection Kit for Standard Gel Electrophoresis

Surveyor Mutation Detection Kits provide a simple, accurate and cost-effective means to scan DNA fragments for mutations with unmatched sensitivity and specificity.

Complete Mutation Detection System: Contains Surveyor Nuclease, all reagents and plasmid controls.

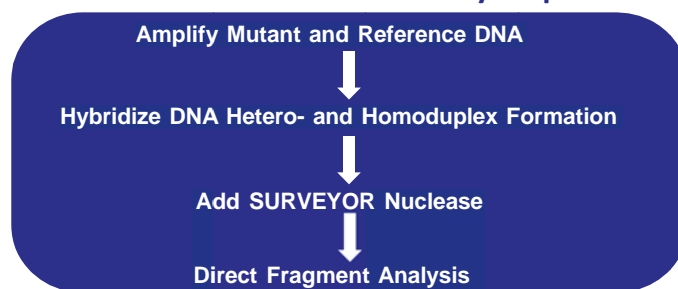


Surveyor Nuclease is a mismatch-specific endonuclease that recognizes mismatches in heteroduplexed DNA and cleaves both strands on the 3' side of the mismatch providing specific information on mutation location, orientation and type.

Figure 1. Agarose (2.5% w/v) gel electrophoresis of fragments generated by digestion of 160 ng of DNA with 1 μ l of Surveyor Nuclease S at 42 °C for 20 min. Analysis of 75% of the digested DNA was performed. The 584-bp amplicons were PCR amplified with Optimase[®] Polymerase from one wild-type reference and three mutant genes. Samples #26, #3 and #13 had one (T>C; fragments were 242 + 342 bp long), two (A>G and T>C; fragments were 135 + 449 bp and 220 + 364 bp long) and three (single-base deletion, T>C and C>A; fragments were 120 + 464 bp, 170 + 414 bp and 226 + 358 bp long) mutations respectively. A 100-bp ladder was run as a sizing standard. The gel was stained with ethidium bromide, visualized with a UV transilluminator and photographed.

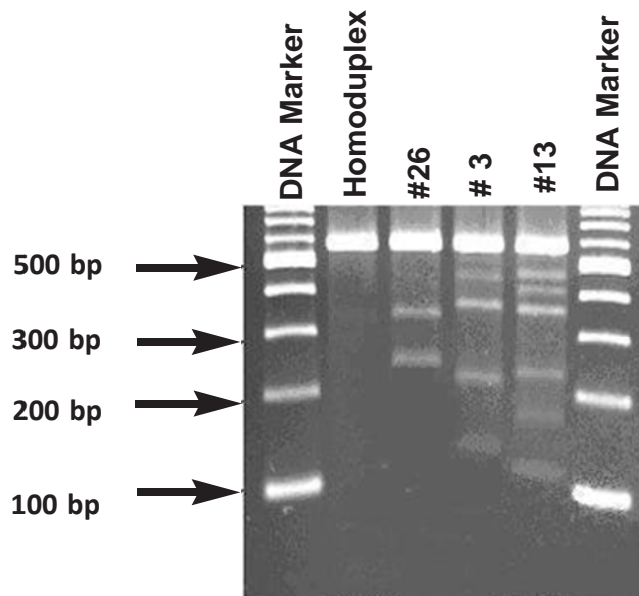
- Somatic, germ-line and mitochondrial mutations
- Insertions, deletions, substitutions and SNPs Low-copy
- mutations and pooled DNA samples

Mutation Detection in Four Easy Steps



Benefits

- Determines mutation loci Saves
- time and money
 - Streamlines DNA sequencing
 - Decreases sequencing backlog and analysis time
 - Validates sequencing results and analysis
 - Decreases chromatogram analysis by 90% **No**
- post-PCR or post-reaction clean-up **High**
- throughput sensitivity and specificity



Surveyor Mutation Detection Kit Components – All Optimized to Work Together

- Surveyor Nuclease S
- Surveyor Nuclease Enhancer S
- Stop Solution
- Control Plasmids and Primers
- 0.15M Mg₂Cl Solution

Products

Surveyor Mutation Detection Kit for Standard Gel Electrophoresis

Quantity	Catalog No.
25 reactions	706025
100 reactions	706020
1,000 reactions	706021

Shipping and Storage

Surveyor products are shipped frozen. Store product at -20 °C in a non-frost-free freezer. Enzyme is guaranteed for a period of 6 months if stored as directed.

Quality Control

Every component is quality control tested as indicated on the certificate of analysis, included in each kit.

Selected References

1. DHPLC/Surveyor Nuclease: A Sensitive, Rapid and Affordable Method to Analyze BRCA1 and BRCA2 Mutations in Breast Cancer Families. Pilato, B. et al. *Mol. Biotechnol.* 52, 8-15. (2011).
2. A molecular analysis of mutations at the complex dumpy locus in *Drosophila melanogaster*. Carmon, A. et al. *PLoS ONE* 5, e12319. (2010).
3. Screening for mutations in kidney-related genes using Surveyor nuclease for cleavage at heteroduplex mismatches. Voskarides, K. & Deltas, C. J. *Mol. Diagn.* 11, 311-318. (2009).
4. Novel method for genomic analysis of PKD1 and PKD2 mutations in autosomal dominant polycystic kidney disease. Tan, Y. et al. *Hum. Mutat.* 30, 264-272. (2009).
5. Single nucleotide polymorphisms, apoptosis, and the development of severe late adverse effects after radiotherapy. Azria, D. et al. *Clin. Cancer Res.* 14, 6284-6288. (2008).
6. Rapid identification of unknown heteroplasmic mutations across the entire human mitochondrial genome with mismatch-specific Surveyor Nuclease Bannwarth, S. et al. *Nat. Protoc.* 1, 2037-2047. (2006).
7. Mitochondrial DNA damage and repair in RPE associated with aging and age-related macular degeneration. Lin, H. et al. *Invest. Ophthalmol. Vis. Sci.* 52, 3521-3529. (2011).
8. Allelic dilution obscures detection of a biologically significant resistance mutation in EGFR -amplified lung cancer. Engelman, J.A. et al. *J. Clin. Invest.* 116, 2695-2706. (2006).
9. A rapid and sensitive enzymatic method for epidermal growth factor receptor mutation screening. Jänne, P.A. et al. *Clin. Cancer Res.* 12, 751-758. (2006).
10. Temperature-mediated heteroduplex analysis for the detection of drug-resistant gene mutations in clinical isolates of *Mycobacterium tuberculosis* by denaturing HPLC, Surveyor nuclease. Shi, R. et al. *Microbes Infect.* 8, 128-135. (2006).

www.IDTDNA.com/Surveyor

For questions or additional assistance, please contact IDT Customer Care at:

USA & Canada

custcare@idtdna.com

1-800-328-2661

Europe

eutechsupport@idtdna.com

+32 (0) 16 28 22 60

Asia Pacific

asiacustcare@idtdna.com

+65 6775 9187

Australia

auscustcare@idtdna.com

1800 092 259

Web Chat at: www.idtdna.com

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