

Highly Sensitive

# STA Core Reagents

A hand is shown holding a glowing DNA sequence. The sequence is written in blue and red letters, with the letters 'T', 'G', 'A', and 'C' being red and the others blue. The sequence is curved and appears to be floating in the air.

ACTGCTAGCTCGATCACAGATCAGTTGAC

## Mutation Detection

**Flexible**

**Sensitive**

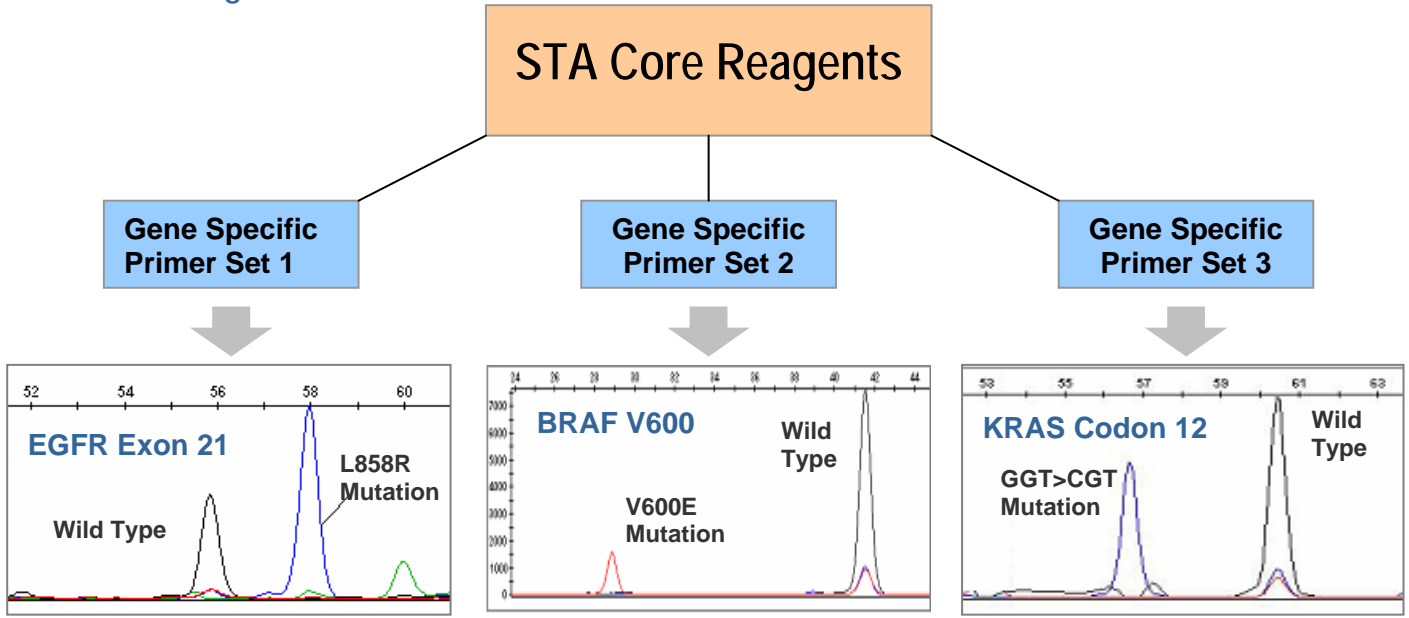
**Accurate**

STA Core Reagents are a set of reagents that allow you to utilize TrimGen's STA technology to develop mutation detection assays in-house. The Core Reagents are designed to work with several different gene specific primers. One set of reagents can perform multiple mutation detection assays. Fragment analysis is then used for quick and accurate data analysis.



## Flexibility

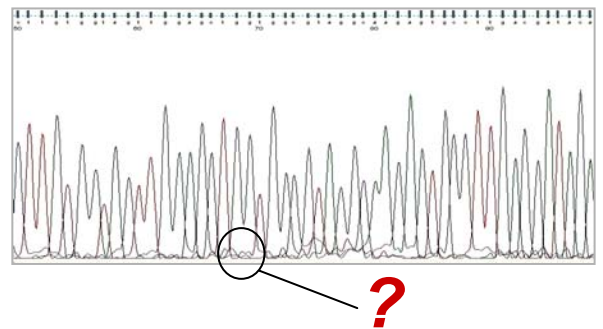
STA Core reagents give you the capability to perform mutation detection with different primer sets. For example, **EGFR**, **BRAF**, and **KRAS Codon 12** assays were validated in-house using **STA Core Reagent A**.



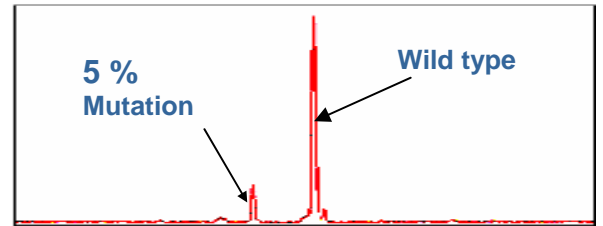
## Sensitivity

STA Technology enriches low-level mutation signals commonly missed by sequencing. Studies using a combination of wild type and mutant DNA show that the enrichment process enhances sensitivity, enabling your assay to detect mutations at levels as low as 1%.

### Sanger Sequencing Data for 5% Mutation Sample



### STA Fragment Analysis Data for 5% Mutation Sample



## Shifted Termination Assay (STA) Technology

STA uses modified enzymes and nucleotides to determine the target nucleotide sequence and extend specialized primers by multiple bases. The multi-base extension not only increases signal strength but also fragment size to create mutation peaks that are easily distinguished from wild type. Mutations are then confirmed by both peak color and fragment size.



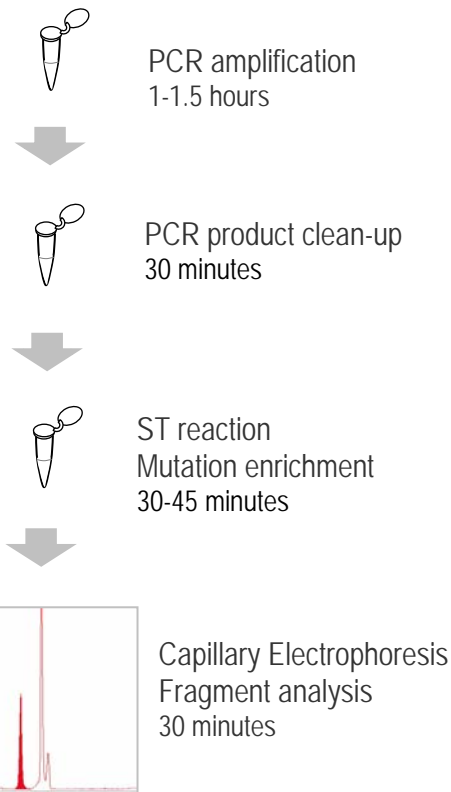
## STA CORE REAGENT WORKFLOW

### MATERIALS NEEDED

STA Core Reagents and Gene-specific Primers

### INSTRUMENT

Capillary electrophoresis sequencer



## FEATURES

### Accurate

Determines mutation by sequence specific enzyme, primers and probes

### Multiplex

Reduces time, consumables, and enables high throughput screening

### Easy Data Analysis

Mutations identified by both fragment size and color.



### STA Core Reagents Include:

32 reactions

- Master mix for PCR amplification
- Reagents for PCR product clean-up
- ST reagents for mutation enrichment
- Loading buffer with fluorescent size standards

## PRODUCT INFORMATION

Product	Cat No.	Size	Compatible with primer sets for
STA Core Reagents A	COR-A	32 reactions	EGFR Point Mutations, KRAS Codon 12, BRAF V600
STA Core Reagents B	COR-B	32 reactions	KRAS Codon 13
STA Core Reagents C	COR-C	32 reactions	EGFR Deletions/ Insertions, BCR-ABL
STA Core Reagents D	COR-D	32 reactions	PIK3CA, KRAS Codon 61

\*For research use only, not for use in diagnostic procedures.