

Highly sensitive

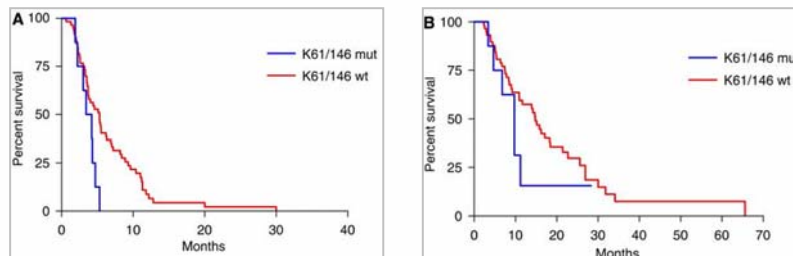
# KRAS Codon 61 Mutation Assay



A hand is shown holding a glowing DNA sequence. The sequence is curved and consists of the letters A, C, G, and T. The letters are colored: A is red, C is blue, G is blue, and T is red. The sequence is: ...CTAGCTCGATCACAGATCAGTTGACC. The 'A' in 'GAA' is red, and the 'C' in 'CAC' is blue.

**Q61H** (CAA>CAT)  
**Q61L** (CAA>CTA)  
**Q61R** (CAA>CGA)  
**Q61E** (CAA>GAA)  
**Q61H** (CAA>CAC)

KRAS mutations are prevalent in human cancers and mostly occur in codons 12, 13 and 61. Codon 61 mutations are missense mutations, which abolish GTPase activity resulting in constitutively activated ras signaling. Patients who carry KRAS mutations are unlikely to benefit from the anti-EGFR treatments because their tumors express a protein that signals cell proliferation without the activation of EGFR. These mutations have been found in patients with endometrial carcinomas, colorectal and non-small cell lung cancers. TrimGen developed this assay to detect 5 oncogenic KRAS codon 61 mutations.



(A) Progression-free survival (PFS) and (B) overall survival curves according to KRAS codons 61 and 146 mutational status in BRAF wild-type subgroup. KRAS codons 61/146 mutations determined a lower response rate to the treatment of anti-EGFR moAbs and worse PFS. Patients bearing KRAS or BRAF mutations had poorer response rate and PFS compared with KRAS and BRAF wild-type patients. Assessing KRAS codons 61/146 and BRAF V600E mutations might help optimising the selection of the candidate patients to receive anti-EGFR moAbs.

*F Loupakis et al -Br J Cancer. 2009 August 18; 101(4): 715-721*

### ASSAY METHOD

Shifted Termination Assay (STA)  
Enrich mutation signals by STA and mutation detection by fragment analysis.

### INSTRUMENT

DNA Sequencer  
(Capillary electrophoresis)

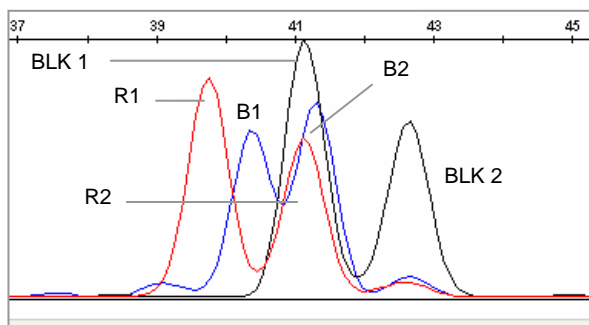
### ASSAY FORMAT

Single tube test.

### SAMPLE SOURCE

Paraffin-embedded (FFPE) tissues  
Fine needle aspiration (FNA) tissues  
Frozen or fresh tissues  
Whole blood

### ASSAY RESULT



Peak ID	Mutations
R1	CAA>CAT
R2	CAA>CTA
Blu1	CAA>CGA
Blu2	CAA>GAA
BLK1	CAA>CAC
BLK2	CAA (wild type)

### ORDERING INFORMATION

Name	Cat. No.	Size	Description
Mutector™ II KRAS Codon 61 Mutation Analysis Reagents	GP06	32 Samples	Identify KRAS codon 61 mutations: Q61H (CAA>CAT), Q61L (CAA>CTA), Q61R (CAA>CGA), Q61E (CAA>GAA), and Q61H (CAA>CAC).

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

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