

## EML4-ALK Fusion Gene Detection Kit

### ALK Resistance Mutations and Cancer

Chromosomal translocations involving the anaplastic lymphoma kinase (ALK) gene have been found in various cancers, including 3-7% of non-small cell lung cancer (NSCLC). These in-frame rearrangements fuse the kinase domain of ALK with other genes, producing a chimeric protein with oncogenic potential. Recently developed kinase inhibitors that target the kinase domain of ALK are currently used to treat ALK fusion positive NSCLC patients.

### Assay Features

The EML4-ALK Fusion Gene Detection Kit provides reagents for detection of 9 EML4-ALK fusion gene variants that have been found in lung tumors. The assay combines first-strand cDNA synthesis (reverse transcription) and simultaneous amplification of mutant ALK and reference genes in a single step. The kit detects 7 variants (1, 2, 3a/b, 5a/b & 6) in one reaction, but does not distinguish between them, and 2 variants (4 & 7) in a second reaction, but does not distinguish between them.

This kit is compatible with various sample types and can be used to detect mutations in RNA isolated from cell lines, fresh-frozen tissues, formalin-fixed paraffin-embedded (FFPE) tissues.

### Specifications

The EML4-ALK Fusion Gene Detection Kit detects the following ALK mutations:

- variant 1 (E13;A20)
- variant 2 (E20;A20)
- variant 3a (E6;A20)
- variant 3b (E6;insA20)
- variant 4 (E14;(-49)A20)
- variant 5a (E2;A20)
- variant 5b (E2;(+117)A20)
- variant 6 (E13;(+69)A20)
- variant 7 (E14;(-13)A20)

### Equipment and Materials

The EML4-ALK Fusion Gene Detection Kit requires a real-time PCR instrument capable of detecting FAM and VIC fluorescent probes. This kit includes primer/probe mix for detection of all 9 variants, one-step enzyme mix for cDNA synthesis and PCR, as well as validated control standards. Columns and reagents for RNA isolation are not included.

### Intended Use

The EML4-ALK Fusion Gene Detection Kit is for Research Use Only (RUO). Not for use in diagnostic procedures.

### Ordering Information

Product Name	Cat. No.
EML4-ALK Fusion Gene Detection Kit	ALKFG-RT46