

Screen for *ALK*, *RET*, and *ROS1* Translocations in Non-Small Cell Lung Cancer Tumors

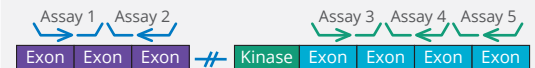
Agena Bioscience's LungFUSION™ Panel offers a rapid screening method for detecting an oncogenic fusion partner in *ALK*, *RET*, or *ROS1* genes. Fusion partners in any of these genes have been correlated with targeted therapies for the treatment of lung cancer. The research panel, for use on the MassARRAY System, offers:

- ✓ Minimal sample requirements with only 10 ng cDNA template in a single well assay.
- ✓ An internal *GAPDH* standard to assess RNA quality and genomic DNA contamination.
- ✓ Built-in *EML4* controls to determine endogenous expression of wild-type lung tissue.

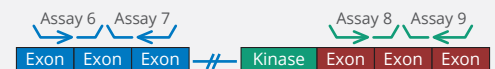
Agena Bioscience also offers panels covering additional oncogenes and somatic mutations. Visit www.agenabioscience.com for more information.

ALK, RET & ROS1 FUSION GENE ASSAY SCHEMA

ALK - anaplastic lymphoma receptor tyrosine kinase



RET - ret proto-oncogene



ROS1 - c-ros oncogene 1, receptor tyrosine kinase



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THE MASSARRAY WORKFLOW

RNA is extracted from each sample and subjected to reverse transcription followed by PCR amplification and primer extension. The extension products are dispensed onto a SpectroCHIP® Array and detected via MassARRAY mass spectrometry. After the sample run, an automated software report provides the translocation status for each sample, as well as a confidence score.





THROUGHPUT

The LungFUSION Panel contains multiplexed assays in a single well, and can be run in a 96-well format (96 samples per plate).

ORDERING INFORMATION

The LungFUSION Panel is available in a 2x96 format (catalog number 17933).

PANEL COMPONENTS

AMPLIFY		PCR Enzyme PCR Accessory Set LungFUSION™ PCR Primers
EXTEND		iPLEX® Pro Reagent Set LungFUSION Extend Primers
DETECT		SpectroCHIP® Array and Clean Resin
ANALYZE		MassARRAY® Analysis Software

DATA ANALYSIS

The LungFUSION Panel report, supported by MassARRAY analysis software, provides a summary view and a sample report. The sample report (Figure 1) enables quick determination as to whether the sample has passed QC (RNA quality, DNA contamination) and whether there was a translocation observed.

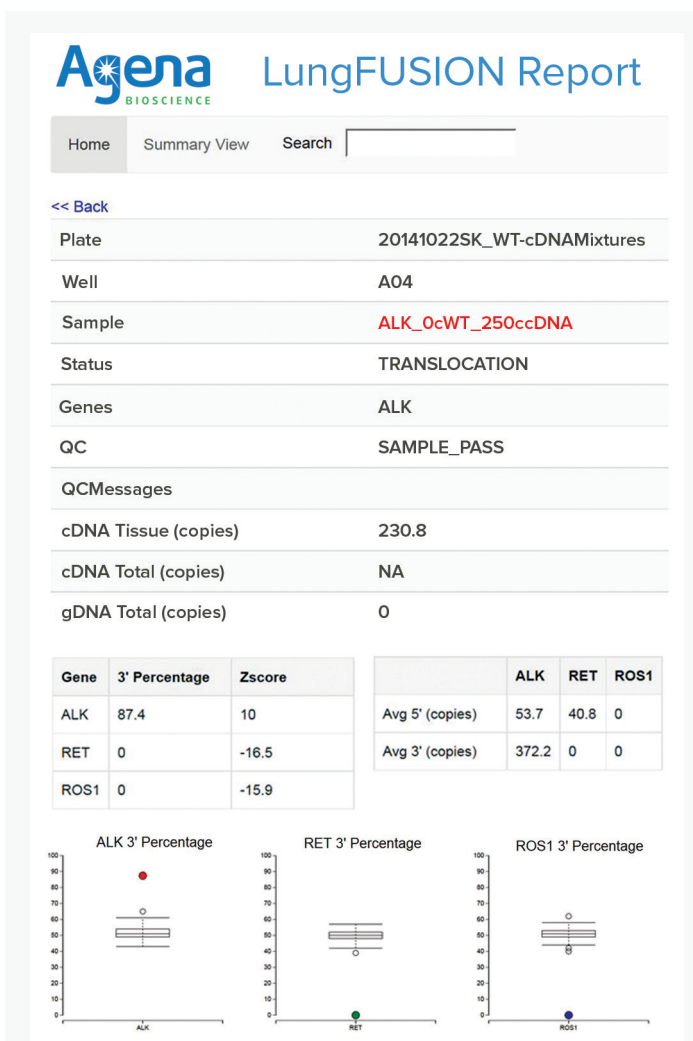


Figure 1. LungFUSION Sample Report

The LungFUSION Panel Sample Report shows the sample (colored dot) against a box plot of baseline data, with the y-axis indicating the percentage of 3' expression. This example shows the presence of an *ALK* translocation.

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