

Client: Example Client ABC123
123 Test Drive
Salt Lake City, UT 84108
UNITED STATES

Physician: Doctor, Example

Patient: Patient, Example

DOB: 6/27/1968
Gender: Male
Patient Identifiers: 01234567890ABCD, 012345
Visit Number (FIN): 01234567890ABCD
Collection Date: 00/00/0000 00:00

RET Gene Rearrangements by FISH

ARUP test code 3001312

RET FISH Result	Positive Controls were run and performed as expected. This result has been reviewed and approved by [REDACTED]
Total Cell Count	100
Scoring Method	Manual
RET FISH Reference Number	ABC 123
RET FISH Source	Tissue

H=High, L=Low, *=Abnormal, C=Critical

Unless otherwise indicated, testing performed at:

INTERPRETIVE INFORMATION: RET Gene Rearrangements, FISH

Fluorescence in situ hybridization (FISH) analysis was performed on a section from a paraffin-embedded tissue block using differentially labeled fluorescent probes targeting the upstream (5') and downstream (3') flanking regions of the RET gene (Agilent Technologies). Cells were evaluated from regions of tumor identified on histopathologic review of a matching hematoxylin- and eosin-stained section. Controls performed appropriately.

This test is designed to detect rearrangements involving the RET gene, but it does not identify a specific partner gene. An abnormal signal pattern seen in 15 percent or more of the evaluated tumor cells is considered a positive result. Based on the assay performance during test validation, the test is expected to detect 100 percent of RET rearrangements in patients with RET-rearranged carcinomas, except for rare instances of cryptic rearrangements. Assay range and limit of detection were generated using normal and known positive cases respectively.

RET rearrangements occur in approximately 1-2 percent of lung adenocarcinomas and 10-20 percent of papillary thyroid carcinomas. Detection of RET rearrangements may be useful for diagnostic classification of disease and for predicting tumor response to targeted therapy.

References:

1. Takeuchi K et al. RET, ROS1 and ALK fusions in lung cancer. Nat Med. 18(3):378-381, 2012.
2. Wang R et al. RET fusions define a unique molecular and clinicopathologic subtype of non-small-cell lung cancer. J Clin Oncol. 30(35):4352-9, 2012.
3. Nikiforov Y. Molecular diagnostics of thyroid tumors. Archives of pathology & laboratory medicine. 135(5):569-77, 2011.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
RET FISH Result	23-179-108427	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Total Cell Count	23-179-108427	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Scoring Method	23-179-108427	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
RET FISH Reference Number	23-179-108427	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
RET FISH Source	23-179-108427	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00

END OF CHART

H=High, L=Low, *=Abnormal, C=Critical

Unless otherwise indicated, testing performed at: