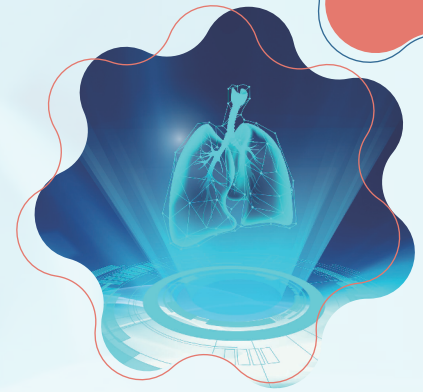


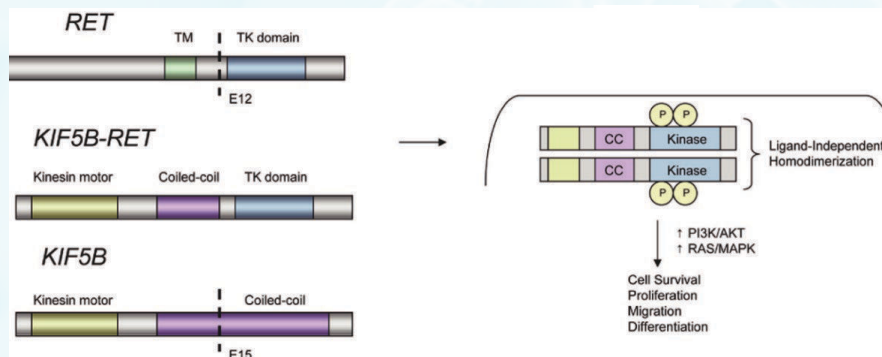
# Lung Cancer RET Fusion Gene Detection Kit

## (Real-Time PCR assay)



### RET GENE FUSION IN LUNG CANCER

The RET proto-oncogene is located at 10q11.2 and is 60 kb, including 21 exons. After the RET gene is fused, dimerization can be completed without ligands, which will cause the RET tyrosine kinase region and downstream MAPK, PI3K/AKT and other signaling pathways continuously activated, leading to cellular proliferation, migration, and differentiation. Gain-of-function alterations in RET have been implicated in human malignancy. KIF5B is the most common RET fusion partner in NSCLC, and seven different KIF5B-RET variants have been identified [1].



KIF5B-RET rearrangement pattern [1]

### RET FUSION AND TARGETED THERAPY OF LUNG CANCER

In 2020, the FDA successively approved Selpercatinib and Pralsetinib for the systemic treatment of patients with RET fusion-positive metastatic non-small cell lung cancer (NSCLC). Based on the approval of the drug, the NCCN include RET fusion detection in the recommendation of NSCLC molecular detection.

### DETECTED GENES

Reaction Tube	Fusion Partners and Exons	RET Gene Exons
RET-1	CCDC6 E1	E12
	NCOA4 E8	
	PRKAR1A E7	
RET-2	KIF5B E15	
	KIF5B E16	
	KIF5B E22	
	KIF5B E23	
RET-5	KIF5B E24	E8
	KIF5B E24	E11
RET-6	KIF5B E15	E11

[1] Oncologist. 2013;18(7):865-75.

## PRODUCT INFORMATION

Product Name	Technology	Pack Size	Instruments Validated	Sample Type
Lung Cancer RET Fusion Gene Detection Kit	Real-Time PCR assay	20 Tests/Kit	Stratagene Mx3000P™ ABI7500 etc	Tumor tissue Pleural effusion&Ascites

## DETECTION SIGNIFICANCE

- »» Inoperable stage III and IV NSCLC patients should be detected for RET gene fusion before systemic treatment, and treatment should be guided by molecular classification.
- »» Select patients for the targeted treatment of NSCLC based on the presence of RET positivity.

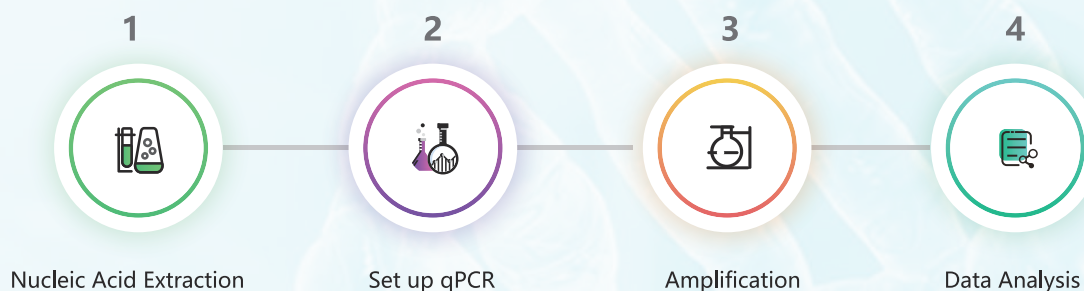
## FEATURES & ADVANTAGES

**Accuracy and Reliability:** Use pre-load PCR tube to effectively avoid cross-contamination.

**High Sensitivity:** Sensitivity can reach as low as 100 copies in RNA.

**Comprehensive Coverage:** Covers the 7 most common KIF5B-RET variants in NSCLC.

## DETECTION PROCESS



For Research Use Only

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