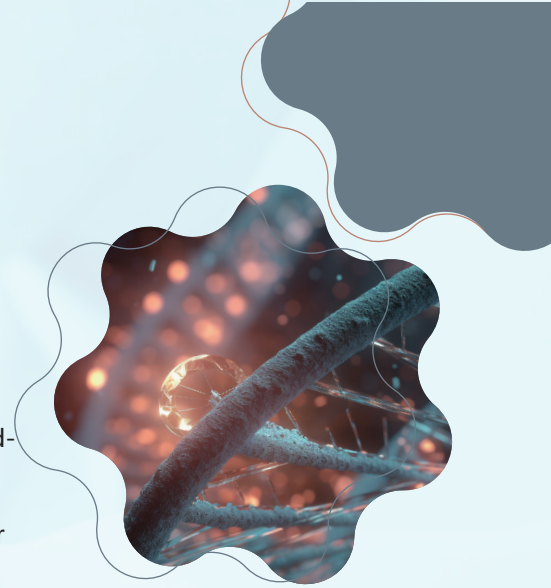
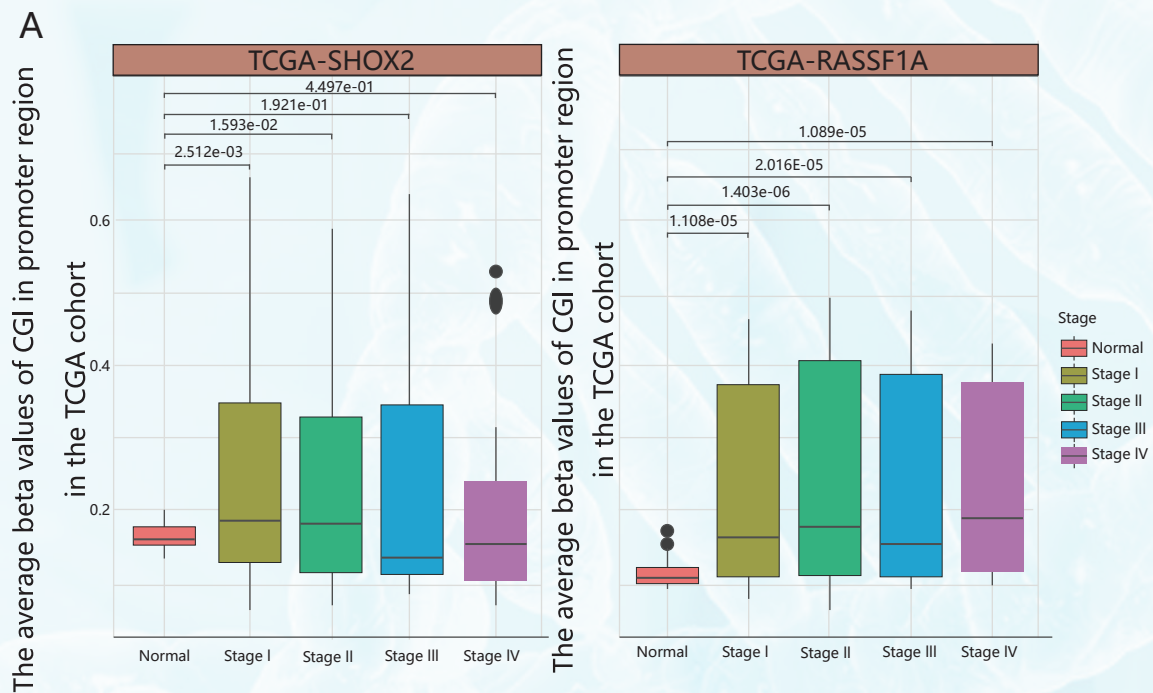


Human RASSF1A-SHOX2 Gene Methylation Detection Kit (Multiplex Fluorescence PCR)



In 2022, the number of cancer deaths worldwide is estimated to be 9.7 million (including non-melanoma skin cancer). Among them, lung cancer is also the main cause of cancer death, with an estimated 1.8 million deaths, accounting for 18.7% of all cancer deaths^[1].

The promoter regions of SHOX2 and RASSF1A in plasma samples of patients with lung cancer were found to be highly methylated. SHOX2, belonging to the SHOX gene family, plays a major role in the development of bone, heart, and nervous system during embryogenesis, and is abnormally expressed in lung cancer, breast cancer, and kidney cancer. The regulation of RASSF1A involves a variety of biological functions such as gene transcription, signal transduction, cell cycle, and apoptosis, and it can inhibit tumor formation through a variety of pathways.



Methylation comparisons between confirmed and normal phase I-IV samples in the TCGA cohort ^[2]

Detection of methylation status of RASSF1A and SHOX2 genes in peripheral blood plasma can effectively improve the detection rate of early stage lung cancer and the survival rate of patients [3]. The early diagnosis of lung cancer is extremely important for the treatment of the disease. The earlier the diagnosis is confirmed, the better the prognosis will be and the longer the survival time will be. Screening is an important way to find lung cancer and precancerous lesions in the early stage.

References

- [1]CA Cancer J Clin. 2024 May-Jun;74(3):229-263.
- [2]Front Oncol. 2022 Jun 28; 12:849024.
- [3]J Cancer Res Clin Oncol. 2020 Jun; 146(6):1379-1393.

PRODUCT INFORMATION

Product Name	Core Technology	Pack Size	Instruments Validated	Sample Type
Human RASSF1A/ SHOX2 Gene methylation detection kit	PAP-ARMS®	20 Tests/Kit	ABI 7500, macro stone SLAN-96P/96S/48P, etc.	Peripheral blood

APPLICABLE POPULATION

- » Long-term smoker;
- » Early detection of small pulmonary nodules in patients with chronic pulmonary disease complicated with lung cancer: differentiation between benign and malignant;
- » Early diagnosis of lung cancer in high risk group: blood lung cancer related tumor markers were positive;
- » Patients with pleural effusion of unknown cause or patients with clinically high suspicion of tumors and unclear or negative morphological pathology;
- » History of malignancy or family history of lung cancer;
- » Occupational exposure history (asbestos, uranium and other contacts).

FEATURES & ADVANTAGES

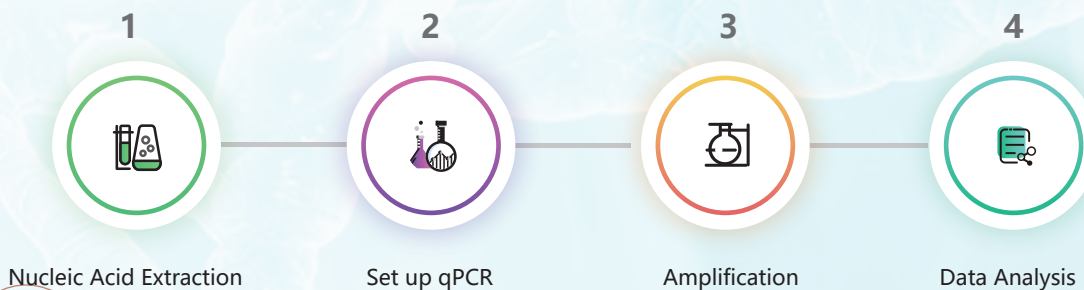
Precise assistance: cfDNA was extracted from peripheral blood plasma, and the double gene methylation in the samples was qualitatively detected. For the reference of auxiliary diagnosis for patients with suspected lung cancer, different typing and staging had high detection rate, and tumor progression could be evaluated vertically.

Double target complementation: methylation detection of SHOX2 and RASSF1A combined with double genes can complement each other and effectively improve the detection rate for patients with lung cancer.

Sensitivity and specificity: Compared with cytology and imaging detection, methylation detection is more stable and objective, making up for the deficiencies of sensitivity and imaging lag of cytology detection. Positive samples are not missed and negative samples are more reliable.

Professional and efficient: Based on PAP-ARMS® amplification technology with independent intellectual property right, the test can be completed in only one step, and the interpretation is simple and automatic reporting can be realized.

DETECTION PROCESS



For Research Use Only

Tel: +86-592-7578317 Email: spacegen@ispacegen.com Web: www.sspacegen.com

Xiamen Spacegen Co., Ltd.
NO.2041, Xizhou Road, Tong'an
District, Xiamen City, Fujian
Province, China

Xiamen SpaceSeq MedLab Co., Ltd.
NO.2045, Xizhou Road, Xike Town,
Tong'an District, Xiamen City,
Fujian Province, China

Suzhou SpaceSeq MedLab Co., Ltd.
4th Floor, Building 1, No. 777
Kangyuan Road, Chengyang
Street, Suzhou City