

Establishment and Characterization of a Novel Chinese Human Lung Adenocarcinoma Cell Line CPA-Yang2 in Immunodeficient Mice

Shunfang YANG, Jianzhong SU, Meiping SHI, Lanxiang ZHAO, Peiling ZHANG, Jie CAO, Jianying LU, Wenhui XIE

摘要

Background and objective The recurrence, metastasis and multidrug resistance (MDR) in lung cancer are the tough problems worldwide. This study was to establish a novel chinese lung adenocarcinoma cell line with high metastasis potential for exploring the mechanism of recurrence, development and MDR in lung cancer. **Methods** The cell came from the abdominal dropsy of a fifty-six years old female patient with lung adenocarcinoma and the tumor markers CA125, CYFRA21-1, CEA, NSE were detected to be higher secretion by radioimmunoassay in the abdominal dropsy. Tumorigenicity of immunodeficient mice was confirmed in 8th passage. The cell growth curve was mapped. Analysis of chromosome karyotype was tested. The gene expression was measured by real-time quantitative PCR. **Results** The tumorigenesis rate started at 8th passage in 3/10 immunodeficient mice via subcutaneously and the fully tumorigenicity was at 11th passage as well as later passages. Under the microscope, the cell showed oval-shap and adherence. The chromosome karyotype analysis of the cells was sub-triploid. Approximately 1×10^6 and 1.5×10^6 cancerous cells were injected into left cardiac ventricle and tail vein of immunodeficient mice respectively. The results showed multiorgan metastasis in the mice after three-four weeks, including mandible, scapula, humerus, vertebral column, femur, rib and brain, liver, adrenal gland, pulmonary in the mice after inoculation. The bone metastasis rate was 100% in the tumor bearing mice by bone scintigraphy and pathology. Quantitative real-time PCR was used to examined and compared with SPC-A-1 lung adenocarcinoma, ESM1, VEGF-C, IL-6, IL-8, AR genes were overexpressed. The novel cell was named CPA-Yang2. **Conclusion** The characteristics of novel strain CPA-Yang2 is a highly metastasis cell line of Chinese lung adenocarcinoma. It has stable traits, highly metastasis ability and maybe is a MDR lung cancerous cell line. Of course, it's a good experimental model for lung cancer research.



全文: [PDF](#) [HTML](#)



ARTICLE TOOLS

-  [索引源数据](#)
-  [如何引证项目](#)
-  [查找参考文献](#)
-  [审查政策](#)
-  [Email this article](#)
(Login required)

RELATED ITEMS

 [Related studies](#)
[Databases](#)
[Web search](#)
 [Show all](#)

ABOUT THE AUTHORS

Shunfang YANG

Jianzhong SU

Meiping SHI

Lanxiang ZHAO

Peiling ZHANG

Jie CAO

Jianying LU

Wenhui XIE



肿瘤防治研究
CANCER RESEARCH ON PREVENTION AND TREATMENT



Pioneer Bioscience
Publishing Company
PBPC www.thePBPC.org

J Thorac Dis

