Monoclonal antibody (McAb) is the key tool for cancer immunodiagnosis and immunotherapy. In our previous study, a cell clone which kept secreting high titer IgG1-type McAb named NJ001 against human non-small cell lung cancer (NSCLC) cells was obtained. The antigen named SP70 of NSCLC specifically identified by NJ001 was proved to be a protein with the relative molecular mass (Mr) of 70 kDa in cytoplasm of the cancer cell and blood stream of cancer patients. IHC results indicated that NJ001 could positively react not only to NSCLC, but also to ovarian cancer, pancreatic cancer and breast cancer, negatively or weak positively react to human small-cell lung cancer (SCLC), pulmonary pseudo tumor and other epithelial tumors. In soft agar assay, the colony formation efficiency of lung adenocarcinoma in NJ001 groups decreased in a dose dependent manner compare to the control group. For the concentration of 100 μg per ml, 200 μg per ml and 400 μg per ml, the inhibition ratio of colony formation was 23.4%, 62.5% and 100% respectively. Meanwhile, NJ001 caused significant reduction in tumor volume and tumor weight compared to control mice in lung cancer xenograft model. The tumor growth inhibition rate of 200 μg, 400 μg and 800 μg NJ001 groups was 10.44%, 37.29% and 44.04%, respectively. NJ001 also led to obvious cytomorphological changes and induced the apoptosis of human lung adenocarcinoma cell line SPCA1 significantly. The newly developed NJ001 selectively reacted to NSCLC tumor cells and so on and exhibited anti-tumor activity both in vitro and in vivo. SP70 is of great value concerning immunodiagnostics and immunotherapy for the cancers with the most high morbidity and mortality in China and holds promise for further research regarding the mechanism underlying tumorigenesis.

Biography
Shiyang Pan has studied lung cancer over 20 years, during which he has found novel biomarkers for NSCLC and authored more than 100 peer-reviewed reports. He is the Editor-In-Chief of Clinical Molecular Diagnostics which was published in the end of 2013 by People’s Medical Publishing House (PMPH) and he has served on the Editorial Board for the Chinese Journal of Laboratory Medicine. He is the Director of the Laboratory Medicine Department of Nanjing Medical University and the National Key Clinical Department of Laboratory Medicine. He is the Chairman of the Jiangsu Society of Laboratory Medicine and Member of the Standing Committee of Chinese Society of Laboratory Medicine, and he has served on Review Committees for the NSFC and Health Administration of China.

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