

Expression and its significance of TSG101 in lung cancer tissue and lung cancer cell lines

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摘要

Background and objective It has been proven that TSG101 is a candidate tumor suppressor gene whose deletion in NIH3T3 cells leads to spontaneous lung metastases in nude mice. Aberrant transcripts of TSG101 have been identified in primary breast carcinomas without evidence of intragenic deletions. To investigate the possible role of TSG101 and aberrant transcripts of TSG101 in lung cancer, we performed transcript analysis and protein analysis in lung cancer cell lines and lung cancer tissue. **Methods** Immunohistochemical method (S-P method) was used to detect the expression of TSG101 in 79 human squamous carcinoma and adenocarcinoma cases with the neighboring noncancerous tissue. RT-PCR was adopted to detect a common shortened TSG101 transcript because of aberrant alternative splicing and the wild-type transcript in lung cancer lines. Western Blot method was adopted to detect the expression of TSG101 protein in lung cell cells. **Results** The expression of TSG101 protein in tumor tissues was significantly lower than that in the neighboring noncancerous tissue. Reverse transcriptase RT-PCR analysis detected a common shortened TSG101 transcript because of aberrant alternative splicing, which was co-expressed with the wild-type transcript in seven lung cancer lines. Although shortened transcript was detected in all of lung cell cells being involved in our experiment, there is more aberrant transcripts in small cell lung cancer (SCLC) lines. Western blot analysis have detected the same differences in protein level. **Conclusion** TSG101 is a candidate tumor suppressor in non small cell lung cancer. However the common TSG101 aberrant transcript may be associated with types of lung cancer, and can be used as valuable biomarkers to evaluate lung cancer poor prognosis.






关键词

Lung neoplasms TSG101 protein Alternative splicing


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
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