

EGFR-Targeted Immunotoxin Exerts Anti-Proliferative Effects on Lung Cancer Cell line by Inducing Apoptosis via EGFR Pathway

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Abstract

Immunotoxin is a class of therapeutic antibodies which can target to tumor cells by a monoclonal antibody or antibody fragment. EGFR has been involved in the development and progression of a diverse type of solid tumors. Recently studies indicated that the response of cancer cells to EGFR-targeted therapy is a complex process that can be affected by multiple intrinsic and extrinsic resistance mechanisms. Previously, we developed a novel EGFR-targeted antibody, which has specific activity against EGFR-overexpressed tumors. Therefore, the antibody was fused to a fragment of Pseudomonas exotoxin A (PE38) to create the immunotoxin. Results indicated that PT shows more effective anti-proliferative activity on EGFR-overexpressed A549 Lung cancer cells. To conclude, our study provides a promising therapeutic approach for immunotoxin-based esophageal cancer treatment.

Biography

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