

Experimental research of targeting VEGF-C gene inhibited in gastric carcinoma therapy by RNA interference

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Objective: To construct the plasmid expression vector pSIH1-H1-copGFPshRNA of RNA interference specific for vascular endothelial growth factor-C (VEGF-C).

Methods: Three shRNAs of genome sequences of VEGF-C gene were retrieved from Genebank, and then were designed and synthesized, and one negative chain as control. The four shRNAs were inserted respectively into plasmid pSIH1-H1-copGFP after anneal and connection and then transfect gastric cancer cells(SGC7901). The expression of mRNA of VEGF-C gene were analyzed by RT-PCR.

Results: The recombinant plasmid of pSIH1-H1-copGFP shRNA specific for VEGF-C were identified by gene sequence analysis, the aim sequence obtained completely coincided with the designs. The expression level of mRNA of VEGF-C gene of the transfect SGC7901 cells was significantly decreased.

Conclusion: The siRNA expression plasmid vector against mRNA of VEGF-C gene has been successfully constructed, and RNAi may be an efficient technique to inhibit lymphangiogenesis of gastric cancer.

Keywords: RNAi; VEGF-C; gastric cancer; shRNA; vector construction