

中文題目: Stat3 與 ERK1/2 蛋白調節肝癌衍生生長因子(HDGF)參與胃癌細胞的移動與球體形成

英文題目: Stat3 and ERK1/2 mediates HDGF-induced motility and sphere formation in human gastric cancer cells

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Background: Gastric carcinoma is one of the most prevalent cancers worldwide, and is the secondary leading cause of cancer-related mortality because of the poor prognosis of patients. It is suggested that hepatoma-derived growth factor (HDGF) gene may be the candidate gene involved in human gastric cancer development. Here we will investigate the role and mechanism of HDGF in the motility and sphere formation in human gastric cancer.

Method and Material: We measured the effect of HDGF on motility and sphere formation in gastric cancer cells. The motility of gastric cancer cells was measured using modified Boyden chambers with filter inserts for 24-well dishes containing 8- μ m pores. The sphere formation of gastric cancer cells also was observed. Stat3 inhibitor and ERK1/2 inhibitor were used to measure HDGF-induced motility and sphere formation in gastric cancer cells.

Result: The results showed that HDGF significantly up-regulated cell motility and sphere formation in gastric cancer cells. Treatment of Stat3 and ERK1/2 reversed the effect of HDGF, thus reducing the capacity of motility and sphere formation in human gastric cancer cells.

Conclusion: These results suggest that blockade of Stat3 and ERK1/2 activity by inhibitors significantly inhibited HDGF-induced motility and sphere formation in human gastric cancer cells.