

人類軟骨肉瘤細胞中 amphiregulin 透過 Ras, Raf, MEK, ERK, c-Jun 路徑而增加 $\alpha6\beta1$ integrin 的表現及細胞移行

Amphiregulin increases $\alpha6\beta1$ integrin expression and cell migration through Ras, Raf, MEK, ERK, c-Jun in human chondrosarcoma cells

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Background:

Amphiregulin is a member of epidermal growth factor (EGF)-like family. It is associated with the disease status and outcomes of cancers. However, the effect of amphiregulin on migration activity in human chondrosarcoma cells is mostly unknown.

Materials & Methods

Cancer cells migration activity was examined using the Transwell assay. The RaS, RaF, MEK, ERK, and c-Jun phosphorylation was examined by using Western blot method. The qPCR was used to examine the mRNA expression of integrins.

Results

Our results show that amphiregulin increased the expression of $\alpha6\beta1$ integrin and the migration ability in human chondrosarcoma cells. Amphiregulin-induced migration activities and the expression of $\alpha6\beta1$ integrin were inhibited by the specific inhibitors and mutants of Ras, Raf, MEK, ERK and c-Jun cascades. Activation of the Ras, Raf, MEK, ERK, and c-Jun signaling pathway after amphiregulin treatment was demonstrated.

Conclusion

Our results found that amphiregulin play a critical role in cancer migration and metastasis. Therefore, amphiregulin enhanced the migration of chondrosarcoma cells and the expression $\alpha6\beta1$ integrin through the Ras, Raf, MEK, ERK, and c-Jun signal transduction pathway.

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