

รูปแบบ Abstract (บทคัดย่อ)

Project Code : MRG5480127

Project Title : Proteomics studies of cytoplasmic membrane proteins expressed on TNF- α induced cholangiocarcinoma cell line

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(ระยะเวลาโครงการ)

Background: Cholangiocarcinoma (CCA) is incurable with high mortality rate regarding to lack of the effective early diagnosis and treatment. Identifying cytoplasmic membrane proteins of invasive CCA that facilitate cancer progression would impact toward the development of novel

tumor marker and effective chemotherapy. Materials and Methods: In this study, invasive character of CCA cell line (KKU-100) was stimulated using TNF- α and then biotinylated purified for mass spectrometry analysis. Results: After comparison the proteomics profile of TNF- α induced invasive with non-treated control cells, 53 and 15 membrane proteins were found to be significantly up- and down-regulated, respectively. ALCAM is a novel candidate showed significant higher in both mRNA- and protein level of TNF- α treated KKU-100 cell line. Immunofluorescent assay also supported that ALCAM expressed on the cell membrane of the cancer and increasing the intensity associated with TNF- α . Conclusions: This study may provide novel protein candidates expressed on cytoplasmic membrane of CCA that would be used as biomarker for development of diagnosis, prognosis and drug or antibody-based targeted therapies in the future.

Keywords:

Cholangiocarcinoma, cytoplasmic membrane proteins, proteomics, mass spectrometry, cell invasion, TNF- α