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A new serum biomarker IPO-38 correlated with diagnosis and predicting prognosis in gastric cancer

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Gastric cancer is one of the most common malignancies in China. So far, there are few reliable serum biomarkers for diagnosis. The available biomarkers of CEA, CA19-9 and CA72-4 are not sufficiently sensitive and specific for gastric cancer. In this study, a high density antibody microarray was used for identifying new biomarkers from serum samples of gastric cancer. Serum samples from colorectal cancer, pancreatic cancer, hepatocellular cancer and breast cancer were also screened for comparative study. As result, some candidate biomarkers were found out. IPO-38, one of up-regulated serum proteins in gastric cancer was selected for subsequent validation including serum IPO-38 expression by ELISA, IPO-38 protein expression by immunohistochemistry. The immunoprecipitation by IPO-38 for gastric cancer cell line and MALDI–TOF/TOF mass spectrometer suggested that pull-down of IPO-38 belongs to H2B histone, which was supported by co-localization study of laser scanning confocal microscope. Follow-up study showed that survival rate of IPO-38 negative group was better than that in IPO-38 positive group. The study firstly clarified the property of IPO-38 proliferating marker, and proposed that IPO-38 protein is a promising biomarker both for diagnosis and for predicting prognosis of gastric cancer.

Biography

Yingyan Yu graduated from Okayama University, School of Medicine of Japan in 1993 and received M.D and Ph.D. She has got a professional training for diagnostic pathology in UPMC, Pittsburgh University, USA in 2002. Now, she acts as a Professor of molecular pathology in Shanghai Ruijin Hospital, Shanghai Institute of Digestive Surgery, affiliated to Shanghai Jiao Tong University, School of Medicine. She is engaged in translational research on gastrointestinal tumor. The research field of Prof. Yu is focused on translational medicine of gastrointestinal cancer, including the relationship of cancer phenotype with the molecular variation, tumor biomarkers for early diagnosis, prognostic prediction and molecular classification for gastrointestinal carcinomas. The goals of her research are to discover the mechanism of heterogeneous histology phenotypes for gastric cancer. For this purpose, molecular genetics, protein and tissue microarray methodologies as well as whole genome sequencing have been used for the studies on human tissue, blood and urine material. Prof. Yu has published over 100 papers in English and Chinese. She also acts as a member of editor board of "World J Gastroenterol", "Word J Gastroenterol Oncol" and so on.

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