

论著

HSP27在左侧结肠癌和右侧结肠癌差异表达的实验研究

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摘要:

目的:应用蛋白质组学技术筛选左侧结肠癌和右侧结肠癌组织中差异表达的蛋白,为左侧结肠癌(left sided colon cancer, LSCC)和右侧结肠癌(right sided colon cancer, RSCC)在肿瘤生物学方面的差异提供分子遗传学依据。方法:收集人LSCC和RSCC组织标本,置-80℃超低温冰箱中保存。应用双向凝胶电泳、质谱分析和生物信息学分离和鉴定LSCC和RSCC中差异表达的蛋白质。应用RT-PCR, Western 印迹和免疫组织化学技术检测差异表达蛋白的表达状态。结果:筛选出55个差异蛋白质点,成功鉴定出21种差异蛋白质。与RSCC比较,14种蛋白在LSCC表达上调,7种蛋白在LSCC表达下调,其中LSCC中HSP27表达下调。通过RT-PCR, Western印迹和免疫组织化学方法证实:在mRNA和蛋白水平, LSCC中HSP27的表达均低于RSCC。结论: LSCC和RSCC的蛋白质组存在差异表达,特别是HSP27在mRNA和蛋白水平均存在差异,这些可能是LSCC和RSCC生物学行?钜斓姆肿右糯

关键词: 左侧结肠癌 右侧结肠癌 热休克蛋白27 蛋白质组学 免疫组织化学

Experimental study of HSP27 differential expression in left sided colon cancer and right sided colon cancer

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Abstract:

ObjectiveTo provide molecular genetic basis for oncobiological difference in left sided colon cancer and right sided colon cancer. Differentially expressed proteins in left sided colon cancer and right sided colon cancer were screened by proteomic technique. MethodsTissue samples including left sided colon cancer and right sided colon cancer were collected and preserved in the -80℃ refrigerator. In the first part of our experiment, protein was separated by 2-dimensional gel electrophoresis (2-DE) and the images of the gels were acquired by the scanner and then analyzed to find the differentially expression protein-spots in different groups. The peptide mass fingerprintings (PMF) was acquired by matrix assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF-MS) and the proteins were identified by data searching in the Mascot-database. Differentially expressed proteins were assayed by RT-PCR,Western blot, and immunohistochemical method. ResultsAltogether 55 differentially expressed protein spots were screened and 21 spots of them were identified. Compared with the right sided colon cancer, 14 proteins were up-regulated and 7 proteins down-regulated including HSP27 in the left sided colon cancer. HSP27 expressed higher in the right sided colon cancer than in the left sided colon cancer. ConclusionThere are differentially expressed proteins in left sided colon cancer and right sided colon cancer, especially difference in HSP27 expression at mRNA and protein level, which may be molecular genetic basis for oncobiological difference in left sided colon cancer and right sided colon cancer.

Keywords: left sided colon cancer right sided colon cancer heat shock protein27 proteomics immunohistochemistry

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