

研究论文

中国小型猪心肌梗死模型的比较蛋白质组学研究

赵艳峰, 叶能胜, 张荣利, 冯雪, 罗国安, 王义明

清华大学化学系分析中心, 北京100084

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摘要 利用二维电泳(2DE)分离中国小型猪心肌梗死模型的正常与梗死心肌组织的蛋白提取液, 采用 PDQuest 软件对比分析了两种心肌组织在pH=5—8范围内的2DE谱图. 正常心肌组织检出851个蛋白点, 梗死组织检出1 032个蛋白点. 发现13个蛋白质点只在小型猪的正常心肌组织中表达, 而有14个蛋白质点只在梗死心肌组织中表达. 另外, 还有49个蛋白点在两种组织中表达量上有显著性变化($P < 0.05$), 选择进行质谱分析其中11个蛋白点, 成功地鉴定出7种蛋白, 蛋白功能分析结果表明, 这些蛋白的差异表达与心肌梗死过程相关.

关键词 [心肌梗死](#) [心肌组织](#) [蛋白质组学](#) [二维凝胶电泳](#)

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Different Protein Expression of Myocardium from Chinese Mini-swine Model of Myocardial Infarct

ZHAO Yan-Feng, YE Neng-Sheng, ZHANG Rong-Li, FENG Xue, LUO Guo-An, WANG Yi-Ming

Analysis Center, Department of Chemistry, Tsinghua University, Beijing 100084, China

Abstract High-resolution two-dimensional polyacrylamide gel electrophoresis(2DE), followed by computer assisted image analysis was used to screen protein patterns of normal and infarcted cardiac muscle tissue for quantitative and qualitative differences in protein expression. In the gels of pH=5—8 IPG strips, 851 protein spots were detected in normal cardiac muscle tissues and 1 032 protein spots were resolved in infarcted cardiac muscle tissues. Thirteen protein spots were only expressed in normal cardiac muscle tissues, and 14 protein spots were only expressed in infarcted cardiac muscle tissues. The results also showed that 49 protein spots displayed quantitative changes in expression between normal and infarcted cardiac muscle tissue. Eleven protein spots were subjected to MS analysis and 7 proteins were identified by PMF. These proteins may be involved in the cardiovascular injury, and play an important role for the future treatment of coronary heart disease.

Key words [Myocardial infarct](#) [Cardiac muscle tissue](#) [Proteome](#) [Two-dimensional gel electrophoresis](#)

DOI:

通讯作者 罗国安 luoga@mail.tsinghua.edu.cn

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