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论文

脑脊液双向电泳中去除高丰度蛋白技术的研究

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摘要:

目的 建立一种去除脑脊液高丰度蛋白的方法并进行双向电泳分析评价。**方法** 采用超滤法浓缩脑脊液样品至适当体积,用商业化血清白蛋白和免疫球蛋白G(IgG)去除试剂盒处理,得到含低丰度蛋白的脑脊液,再用丙酮沉淀法除盐并进行二维凝胶电泳(2-DE)分析和2-DE Western blot鉴定。**结果** 此法可有效去除脑脊液中的白蛋白和IgG,2-DE图谱分析显示,去除高丰度蛋白后脑脊液低丰度蛋白富集明显,与2-DE Western blot结果对比,四连接素的三个不同片段去除高丰度蛋白后可全部显现。**结论** 本研究建立的脑脊液高丰度蛋白去除方法简便易行,有利于双向电泳中低丰度蛋白的检出。

关键词: 脑脊髓液; 电泳, 凝胶, 双向; 高丰度蛋白; 2-DE Western blot

High-abundant protein depletion method for cerebrospinal fluid in 2-DE analysis

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Abstract:

Objective To establish and evaluate a method of depleting high-abundant proteins for cerebrospinal fluid (CSF) in two-dimensional electrophoresis(2-DE) analysis. **Methods** The CSF sample pool was concentrated to an appropriate volume by ultrafiltration, and then high-abundant proteins were depleted with the commercial Albumin and IgG Removal Kit designed for serum. The remaining CSF containing low-abundant proteins was precipitated by acetone and used for 2-DE analysis and 2-DE Western blot identification. **Results** Most high-abundant proteins could be depleted with this method. The following 2-DE analysis revealed that low-abundant proteins were obviously enriched after the depletion of high-abundant proteins. Compared with the results of 2-DE Western blot, depleting high-abundant proteins enabled the 3 different fragments of tetranectin visible in 2-DE map. **Conclusion** The high-abundant protein depletion method for CSF established in this study is simply performable, and can be helpful in the detection of low-abundant proteins in 2-DE analysis.

Keywords: Cerebrospinal fluid; Electrophoresis, gel, two-dimensional; High-abundant protein; Two-dimensional electrophoresis western blot

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