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**摘要:**

目的: 制备重组EB病毒(Epstein-Barr virus, EBV)壳抗原(viral capsid antigen, VCA) BALF4蛋白, 并探讨其在鼻咽癌检测中的应用价值。方法: 采用PCR法从EBV DNA序列中扩增 BALF4 基因, 酵母表达载体pPICZαA连接, 重组pPICZαA-BALF4载体转染GS115酵母菌, 甲醇诱导重组BALF4蛋白表达并纯化。重组BALF4蛋白经SDS-PAGE、Western blotting鉴定后作为包被抗原, 制备ELISA试剂, 检测鼻咽癌患者EBV-IgA抗体。结果: 成功构建pPICZαA-BALF4表达载体, 并在GS115酵母菌中高效地表达重组BALF4蛋白。重组BALF4蛋白相对分子质量为52 000, 经Western blotting证实重组BALF4蛋白具有免疫原性。重组BALF4蛋白作为包被抗原, 检测鼻咽癌患者和正常对照血清(各300份)中EBV-IgA抗体的灵敏度和特异性分别为81%和94%。结论: 成功制备重组EB病毒壳抗原BALF4蛋白, 该蛋白在鼻咽癌血清筛选具有较高的敏感度及特异性。

**关键词:** [鼻咽肿瘤](#) [EB病毒](#) [壳抗原](#) [BALF4](#)

Preparation of recombinant Epstein-Barr virus viral capsid antigen BALF4 protein and its application in nasopharyngeal carcinoma diagnosis [Download Fulltext](#)

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Abstract:

Objective : To prepare recombinant BALF4 poptein of VCA (viral capsid antigen) in Epstein-Barr virus and analyze its application in detection of nasopharyngeal carcinoma (NPC). Methods: BALF4 gene was amplified from EBV DNA sequence by PCR and then inserted into pPICZαA pichia pastoris expression vector. Recombinant pPICZαA-BALF4 plasmid was transfected into GS115 yeast cells, and corresponding recombinant BALF4 protein was induced by methanol. The recombinant BALF4 protein was identified by SDS-PAGE and Western blotting analysis, and used as coating antigen for detection of EBV-IgA antibody in NPC patients by ELISA. Results: pPICZαA-BALF4 expression vector was successfully constructed, and recombinant BALF4 protein was effectively expressed GS115 yeast cells. The molecular weight of recombinant BALF4 protein is approximately 52 000, and the recombinant BALF4 protein showed good immunoreactivity as detected by Western blotting analysis. Recombinant BALF4 protein was used as coating antigen in detecting EBV-IgA antibody levels in serum samples collected from NPC patients and healthy controls, and the sensitivity and specificity of VCA-BALF4 in the test were 81% and 94%, respectively. Conclusion: The recombinant BALF4 protein has been successfully prepared and it has satisfying sensitivity and specificity in serum screening of NPC patients.

Keywords: [nasopharyngeal neoplasmas](#) [Epstein-Barr virus](#) [viral capsid antigen](#) [BALF4](#)

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