

## SPR生物传感器在急性白血病髓系抗原CD33检测中的应用

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摘要：

采用自组装膜技术，在传感芯片表面修饰抗CD33单克隆抗体，利用自行构建的SPR生物传感器检测人骨髓血液中急性白血病髓系抗原CD33的表达。实验结果表明SPR生物传感器对AML患者骨髓血液的响应值远远大于对健康人骨髓血液的响应值。与传统的流式细胞术（FCM）方法相比，SPR方法具有能快速给出定量分析结果，操作简单等优点。用该SPR生物传感器对分离的骨髓血液和全血进行比较检测，结果显示SPR生物传感器对CD33抗原具有很好的特异选择性。SPR生物传感器在急性白血病髓系抗原CD33的检测中有着广阔的应用前景。

关键词：SPR生物传感器，CD33，自组装膜，抗CD33单克隆抗体，急性髓系白血病

## Application of SPR biosensors in the detection of acute myeloid leukemia associated-antigen CD33

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**Abstract:**

A spectral SPR biosensor was used for the detection of acute myeloid leukemia-associated antigen CD33 cells in human bone marrow. The specific monoclonal antibody CD33-Ab was immobilized on the surface of a SPR sensor chip using the technology of self-assembly. The experimental results show that the bone marrow of AML patients reveals much higher expression level of CD33 than those of healthy people. The results of the responses to different type bone marrow show that the selectivity of the SPR biosensors is good. The initial results demonstrate that the SPR biosensor has potential for application to detection of acute myeloid leukemia associated antigen CD33.

**Keywords:** SPR biosensor, CD33, self-assembled monolayer, monoclonal antibodies CD33-Ab, acute myeloid leukemia

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