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PCR产物直接测序技术中影响因素的研究

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摘要　探讨了PCR产物直接测序技术中的影响因素，结果表明：PCR产物特异性是影响其测序成败的关键因素，PCR反应只有产生惟一扩增产物时，其产物才能被用来直接测序；PCR反应体系残留混合物（dNTP、引物和盐离子等）对其测序质量有明显不利影响，PCR产物纯化后其测序质量能明显提高；同时，PCR产物大小不同，其测序反应的模板用量也不同，在一定长度范围内，最适模板用量随PCR产物长度增加而增加。

Factors that Influence Direct Sequencing of PCR Products

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Abstract:Factors influenced direct sequencing of PCR (polymerase chain reaction) products were investigated in this paper.It showed that the specialization of PCR products played a key role in their sequencing reactions and only which could be sequenced directly.It also showed that the PCR reaction residues (including dNTP,primers,and metal ion) affected badly on the sequencing quality,so the purification of PCR products was necessary before sequencing.In addition,the optimum templates amount in sequencing reaction rose with the increasing of their DNA size in a certain range.

Key words：polymerase chain reaction(PCR); direct sequencing of PCR product; ABI 377-DNA sequencer; Q20

关键词　聚合酶链反应（PCR）　PCR产物直接测序　ABI-377型DNA自动测序仪　Q20

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