技术与方法

两温度梯度多重PCR鉴别牛早期胚胎性别的技术研究

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摘要
稳定、可靠和快速的牛胚胎性别鉴定方法在生产应用中具有重要意义。通过两温度梯度PCR方法对牛基因组、克隆胚胎、胚胎样品进行性别鉴别实验研究，建立了稳定、简便、快速的牛早期胚胎性别鉴别两温度梯度PCR方法，鉴定时间仅为57分钟。采用两温度梯度PCR方法对30枚奶牛胚胎进行了早期性别鉴别，并将鉴别的15枚胚胎（11枚为雌性，4枚为雄性）移植到同期处理的15头受体母牛体内。60天后妊娠检查，有7个受体成功受孕，5头受体怀孕晚期流产，流产犊牛全部为母犊。结果产下1公1母两头犊牛，流产个体与出生个体的性别与PCR鉴别结果完全相符。

关键词　　性别鉴别；两温度梯度PCR；胚胎

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The Study on the Technique of Sexing Bovine Pre-Implantation Embryos with Two-Temperature Gradient Multiplex PCR

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Abstract
For the stable, reliable, fast method of sexing bovine pre-implantation embryos is still play very important role in husbandry production, the amplification experiment under the condition of the two-temperature gradient PCR was done with bovine samples such as genome, cloning embryos, embryos respectively. As a result, the stable, simple, fast method of two-temperature gradient PCR for sexing bovine pre-implantation embryos was obtained, which only took 57 minutes to identify the embryo sex. A total of 30 dairy embryos were sexed with the two-temperature gradient PCR method in the study. 15 identified embryos (11 female, 4 male) were transferred into 15 recipient cows, among them 7 were pregnant after 60 days. In the end, 5 female calves were aborted in late pregnancy, and 1 female and 1male dairy calf were born. The sexes of aborted and born calves were fully in accordance with the embryo sex predetermination with PCR method.

Key words sexing；two-temperature gradient PCR；embryos

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