

# Fetal Sex Determination of Macaque Monkeys by a Nested PCR Using Maternal Plasma

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### Abstract :

Non-invasive fetal sex determination is required for biomedical studies, in which some sexual difference would be expected in fetal events, in order to make a choice of male or female fetus. To detect male fetal DNA of the sex-determining region Y gene (SRY) in maternal macaque plasma, nested real-time PCR using the SYBR Green system was developed. In all cases of pregnant macaques with male fetuses, a nested PCR product of SRY was amplified from the mother's plasma, while no amplicon was detected in any case of pregnancy with a female fetus. Interestingly, fetal SRY DNA appeared to be cleared rapidly from the maternal blood after parturition. The current method is sensitive and can be performed with a regular PCR machine.

### Key Word :

fetal DNA, maternal blood, SRY

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