遗传 2005 27 (2): 221-226 ISSN: 0379-4172 CN: 11-5450/R

研究报告

羊驼染色体核型及其G分带的研究Study on the Chromosomal Karyotype and G-banding of Alpacas (Lama pacos)

张巧灵, 董常生, 贺俊平, 赫晓燕, 范瑞文, 耿建军, 仁玉红ZHANG Qiao-Ling, DONG Chang-Sheng, HE Jun-Ping, HE Xiao-Yan, FAN Rui-Wen, GENG Jian-Jun, REN Yu-Hong
山西农业大学动物科技学院，太谷 030801 College of Animal Science and Technology, Shanxi Agricultural University，TaiGu 030801，China

收稿日期 修回日期 网络版发布日期 接受日期

摘要

为了从选种、杂交改良、疾病诊断以及性别决定的遗传机制等方面为羊驼的繁育与推广提供更为有效的细胞遗传学资料，本试验采用外周血淋巴细胞培养法及胰酶-EDTA法分析了23只胡阿基亚型羊驼（Huacaya alpaca，雌20只，雄3只）的染色体核型及其G-分带，结果表明：羊驼二倍体染色体数目为2n=74，雄性羊驼核型为74，XY；雌性羊驼核型为74，XX。其中，1～20对常染色体为亚端着丝粒染色体，21～36对常染色体为亚中着丝粒染色体和中着丝粒染色体，X为中着丝粒染色体，Y为端着丝粒染色体。G-带分析表明，羊驼G带明暗相间，显现出不同的带纹，且羊驼每对染色体都有其独特的带纹特征，其带纹数目和精细程度随着染色体长度的增加而增加。Abstract: Blood samples from 23 Huacaya alpacas, 3 males and 20 females, were used to study chromosomes and karyotypes, so as to provide some effective cytogenetic bases for the selection, improvement by crossing, disease diagnosis of alpacas, and genetic mechanisms of sex determination. Peripheral blood lymphocyte culture was used to prepare chromosome. A method of trypase-EDTA was used for G-banding. The results showed as follows:
The number of diploid chromosomes was 2n=74, with the karyotype 74, XY and 74, XX for males and females respectively. Thirty-six homologous pairs of chromosomes were autosomes, in which chromosomes pairs No.1 to No.20 were acrocentric-subterminal and No.21 to No.36 metacentric-submetacentric. And X chromosome was metacentric, Y chromosome telocentric.
The analysis of G-bands showed that bright and dark bands appeared by turn. It showed different bands. And every pair of chromosomes had its distinct band, and the longer the chromosomes, the more the number of bands, and the more clear the bands.

关键词 羊驼 外周血淋巴细胞 染色体 核型 G-分带 Key words alpacas peripheral blood lymphocyte chromosome karyotype G-banding
分类号

Abstract

Key words

DOI:

通讯作者