

生物技术·遗传育种

中国昆明犬种群遗传关系的RAPD初步研究*

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收稿日期 2005-3-17 修回日期

摘要 昆明犬是我国唯一的警用犬种。结合现有种犬群的血统档案,应用RAPD技术对昆明犬的群体〔狼青(L)、草黄(C)及黑背(H)品系〕进行了遗传分析,从分子生物学的角度探讨了昆明犬的系统发育、各品系之间的亲缘关系和整个种群的遗传多样性。用以筛选出来的11条引物对46个样本犬进行扩增,共检测出85条扩增片段,且均为多态。对46份样本进行UPGMA聚类,研究结果表明:全同胞的犬在较高的相似水平上聚为1组。3品系犬的遗传背景复杂程度依次为:狼青>黑背>草黄。经比较,L和C的亲缘关系最近,L和H的亲缘关系较近,H和C的亲缘关系最远。从整个样本群体来讲,昆明犬存在丰富的遗传多样性。

关键词 [昆明犬](#) [遗传关系](#) [RAPD](#)

分类号 [S 829.2](#) [S 813.3](#)

Primary Study on the Genetic Relationship of Strains of Kunming Dog by RAPD

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Abstract

Kunming Dog is the single police dog originated from China. Random Amplified Polymorphic DNA (RAPD) technique was used to analyze the system development of Kunming Dogs, which including strains of cyan(L), yellow(C) and black back(H), affinity relationship among three strains and genetic diversity of based on existent ancestry files of Kunming Dogs. The eleven primers produced 85 DNA bands totally that all were polymorphic. Unweighted Pair Group with Mathematic Average (UPGMA) was used to construct genetic tree of all individuals tested based on genetic distance. The dendrogram of UPGMA showed that 46 dogs were clustered into "A" and "B" groups. Full-sib dogs were classified into same groups based on highly similarity. The H strain was more complex, the C strain was the third complex. The affinity between L strain and C strain is relatively closer, the affinity between L strain and H strain is close, the affinity between H stain and C strain is relatively further. The result from experiment showed the colony of Kunming Dogs had abundant genetic diversity.

Key words [Kunming Dog](#) [genetic relationship](#) [RAPD](#)

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