عنوان مقاله:

Fish- Mapping and Standard GTG-Banding Karyotype of Three Egyptian Sheep Breeds

محل انتشار:

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خلاصه مقاله:

Standardized karyotyping by GTG- banding technique and physical chromosome mapping by Fluorescent in Situ Hybridization (FISH) were utilized to characterize the three Egyptian breeds of sheep (Barki, Rahmani and Ossimi). Blood samples were collected from ۱۵ individuals from each breed of sheep. G-banded chromosomes revealed that the karyotype macrostructure was highly conserved and in considerable accordance to the standard karyotype of the Ovis aries. The chromosome diploid number was ۵۴ (۲n=۵۴, XX / XY). The karyotype formula was ۲n, ۵۴ = Lm۶ + Ma۲۲ + Sa۲۴+ sex chromosomes. Physical chromosome mapping of the three breeds (Barki, Rahmani and Ossimi) was carried out by localization of two subtelomeric SSR and two (SPRN) related specific sequences. The two subtelomeric SSR sequences revealed six different loci in five chromosomes (۱p۳۷, ۱p۳۶ and ۱۷q۲۶ with the EPCDV۰۰۸ probe) and (۲q۴۵, ۴q۲۲ and ۲۴q۲۴ with the EPCDV۰۱۶ probe), respectively. In addition the two (SPRN) related specific sequences were successful in differentiating among the three breeds. The probe OriaBAC۲۷۳H۷ hybridized to a similar locus (۲۰q۱۳) in breeds Rahmani and Ossimi, while, in Barki, it hybridized to a different locus (۲۲q۲۴). However, probe OriaBAC۲۶۵G۴ hybridized to three different loci (۱۷q۲۵, ۲۲q۲۴ and ۲۰q۱۳) in Barki, Rahmani and Ossimi, respectively.Standardized karyotyping by GTG- banding technique and physical chromosome mapping by Fluorescent in Situ Hybridization (FISH) were utilized to characterize the three Egyptian breeds of sheep (Barki, Rahmani and Ossimi). Blood samples were collected from ۱۵ individuals from each breed of sheep. G-banded chromosomes revealed that the karyotype macrostructure was highly conserved and in considerable accordance to the standard karyotype of the Ovis aries. The chromosome diploid number was ۵۴ (۲n=۵۴, XX / XY). The karyotype formula was ۲n, ۵۴ = Lm۶ + Ma۲۲ + Sa۲۴+ sex chromosomes. Physical chromosome mapping of the three breeds (Barki, Rahmani and Ossimi) was carried out by localization of two subtelomeric SSR and two (SPRN) related specific sequences. The two subtelomeric SSR sequences revealed six different loci in five chromosomes (۱p۳۷, ۱p۳۶ and ۱۷q۲۶ with the EPCDV۰۰۸ probe) and (۲q۴۵, ۴q۲۲ and ۲۴q۲۴ with the EPCDV۰۱۶ probe), respectively. In addition the two (SPRN) related specific sequences were successful in differentiating among the three breeds. The probe OriaBAC۲۷۳H۷ hybridized to a similar locus (۲۰q۱۳) in breeds Rahmani and Ossimi, while, in Barki, it hybridized to a ... different locus (۲۲q۲۴). However, probe OriaBAC۲۶۵G۴ hyb

کلمات کلیدی:
Ovis aries, Sheep, Chromosomes, Karyotype, GTG-banding, Fish