Heterochromatin heterogeneity revealed by restriction endonuclease

digestion and subsequent C-banding on Caprine metaphase

chromosomes

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Restriction endonucleases (RE-s) are know to induce DNA cleavage even in the fixed

metaphases chromosomes and cause extraction of fragmented DNA, which can be

revealed as characteristic staining patterns by Giemsa staining. Heterochromatic regions

may show uniform or differentiated specific resistance or increased sensitivity to RE

(Babu and Verma, 1990). Therefore, this method provides a powerful tool for the study

of polymorphisms and compositional heterogeneity of the heterochromatic regions.

Here, we used Capra hircus metaphases and subject it to banding with HaeIII and HinfI

restriction enzymes. We also submitted these metaphases to sequential C-banding. We

found heterogeneity of the heterochromatic regions that can be useful to identified

specific chromosomes and can be used for the study of Capra heterochromatin

evolution.

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Reference

Babu, A. and Verma, R. S. (1990). Anatomy of human genome by restriction

endonucleases Alu I, Dde I, Hae III, Hinf I, Mbo I, Rsa I and their application in clinical

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