用原位分子杂交技术定位牛生长激素基因于5号染色体①李昕,刘凌云

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摘要 本工作利用放射性标记的bGH基因(3.0kb)为探针,通过原位杂交定位牛生长激素基因于染色体5q22-26内。该结果与以前的bGH基因定位的结果不同,讨论了基因探针、基因定位方法等方面与定位准确性的关系。

关键词 牛 生长激素 基因图 原位杂交

分类号

Localization of GH Gene to Bovine Chromosome 5q22-26 by in situ Hybridization (1)

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Abstract

The bGH entire gene (3.0Kb), as a probe which was cloned into recombinant plasmid pbGh was used for in situ hybridization. The E.coli RR1, as a receptor, was transformed by recombinant plasmid pbGH. Recombinant plasmid DNAs were amplified, extracted and purified, the bGH fragments were collected and ;; labelled by nicktranslation. The metaphase and early-metaphase chromosome spreads were prepared from TdR-BrdU-synchronized peripheral blood lymphocytes in Beijing Black-white dairy cattle. After in situ bybridization and autoradiography, chromosomal G-bands were stained with FPG method. The number of sliver grains on every chromosome was calculated. The result showed that bGH gene is located at chromosome 5q22-26. This assignment of the GH gene in cattle differs from those of previous assignments. Finally, the relationships between probe, mapping method and mapping accuracy were discussed.

Key words Growth hormone (GH) Cattle(Bos taurus) Gene mapping in situ hybridization

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