

عنوان مقاله:

Development and Cytogenetic Characterization of a Continuous Bovine Kidney Cell Line (IRKHBK) and Evaluation its Susceptibility to some Viruses

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خلاصه مقاله:

In this study a continuous bovine kidney cell line derived from a primary bovine kidney cells was established for the first time in Iran. The cells were originating from two-day-old normal male calf of Holstein breed. The cell cultures were continuously passaged following complete proliferation of primary cells. The specific properties or characteristics of the cell were defined using cytogenetic and tumorigenicity analysis. An increasing in cell proliferation was observed at 3rd passage. Subsequently chromosomes analysis was shown the first chromosomal adhesion. In karyotyping a decrease in number of the cell's chromosomes ($n=59$) was detected compared to the normal bovine cells chromosome count ($2n=60$). The cell obtained unlimited proliferation capacity from 7th passage and was identified as infinite cells at passage 9th. The continuous cell line named Iran Razi Khedmati Bovine Kidney (IRKHBK) and was deposited in National Cell Bank of Iran (NCBI), Pasteur Institute. Susceptibility of the IRKHBK cell line for isolation and replication processes of bovine herpesvirus-1 (BHV-1) and bovine virus diarrhea-mucosal disease (BVD-MD) were also evaluated. The results showed that this cell is more susceptible to the viruses compared to primary bovine kidney cells. According to our results, IRKHBK cell is recommended for routine assays of viruses as a substitution for primary bovine kidney cells.

کلمات کلیدی:

cell line, IRKHBK, Karyotype, Chromosome

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