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(54) **Title**: ARTIFICIAL CHROMOSOME VECTOR

(57) **Abstract**: According to the present invention there is provided a method of producing a protein in a eukaryotic cell line, comprising the steps of a) providing a backbone of an artificial chromosome, b) recombining the nucleic acid encoding said protein into said backbone to generate an expression vector, c) introducing said expression vector into a eukaryotic host cell line to obtain a eukaryotic expression cell line, d) cultivating said expression cell line to produce said protein, and e) isolating said protein. The invention further relates to respective vectors and transgenic cell lines.