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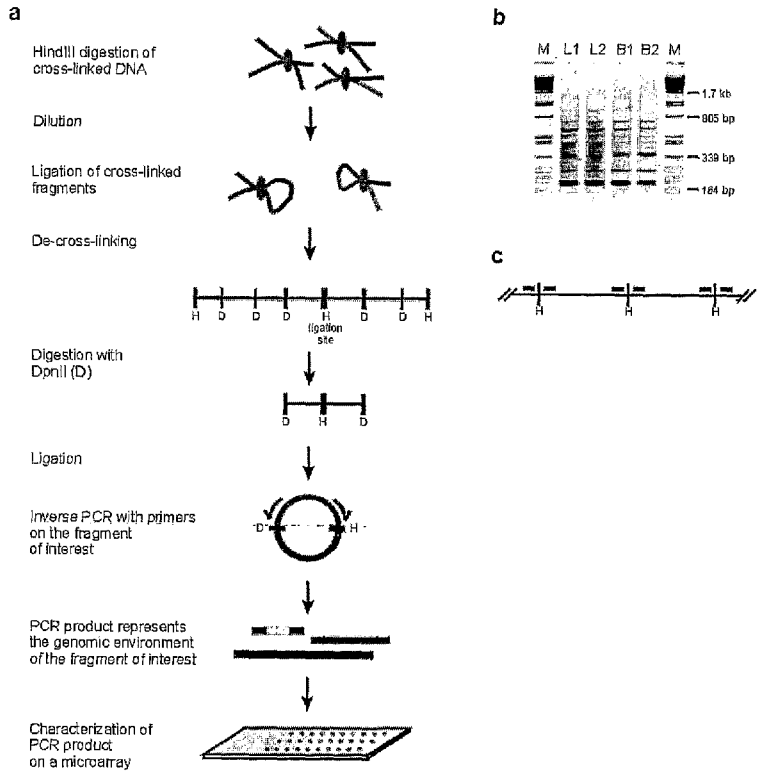
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(54) Title: CHROMOSOME CONFORMATION CAPTURE-ON-CHIP (4C) ASSAY



(57) Abstract: The present invention relates in one aspect to a method for analysing the frequency of interaction of a target nucleotide sequence with one or more nucleotide sequences of interest (eg. one or more genomic loci) comprising the steps of: (a) providing a sample of cross-linked DNA; (b) digesting the cross-linked DNA with a primary restriction enzyme; (c) ligating the cross-linked nucleotide sequences; (d) reversing the cross linking; (e) digesting the nucleotide sequences with a secondary restriction enzyme; (f) ligating one or more DNA sequences of known nucleotide composition to the available secondary restriction enzyme digestion site(s) that flank the one or more nucleotide sequences of interest; (g) amplifying the one or more nucleotide sequences of interest using at least two oligonucleotide primers, wherein each primer hybridises to the DNA sequences that flank the nucleotide sequences of interest; (h) hybridising the amplified sequence(s) to an array; and (i) determining the frequency of interaction between the DNA sequences.

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