

Title (en)

IMPROVED METHOD FOR NUCLEOTIDE DETECTION AND DEVICES USED THEREIN

Title (de)

VERBESSERTE METHODE ZUM NUKLEOTIDNACHWEIS UND VORRICHTUNGEN ZU DEREN AUSFÜHRUNG

Title (fr)

TECHNIQUE PERFECTIONNEE DE DETECTION DE NUCLEOTIDES ET DISPOSITIFS UTILISES

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Application

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Abstract (en)

[origin: WO0118241A1] The present invention provides an improved method of detecting the presence of a nucleotide sequence within a double-stranded DNA in a sample comprising the following steps: a) coating a solid support with a first layer of biotinylated serum albumin, and a second layer of streptavidin having sufficient density to perform efficient microarray analysis; b) digesting the double-stranded DNA with an exonuclease to convert double-stranded to single stranded DNA, derived from a mixture of target cells and other cells, to a single-stranded DNA; c) capturing a first nucleic acid probe adapted by biotin to said coated solid support defined in step a; d) hybridizing (i) the single-stranded DNA with the first nucleic acid probe, and (ii) a second nucleic acid probe labeled with a detectable moiety which can hybridize with the single-stranded DNA adjacent the hybridized first nucleic probe; e) ligating the hybridized first and second nucleic acid probes in case of perfect match only; f) denaturing the ligated first and second nucleic acid probes from the hybridized single-stranded DNA; g) removing non-covalently bound labeled probes and single stranded DNA; and h) detecting captured detectable moiety indicating the presence of the nucleotide sequence within the double-stranded DNA in the sample; wherein steps c.-h. are performed by microarray technique. Also provided is a device and a kit suitable for carrying out said detection method.

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