

Title (en)

OLIGONUCLEOTIDE PRIMERS THAT DESTABILIZE NON-SPECIFIC DUPLEX FORMATION AND USES THEREOF

Title (de)

OLIGONUKLEOTID PRIMER DIE NICHT-SPEZIFISCHE HIBRIDISIERUNG INSTABILISIEREN UND DESSEN BENUTZUNG

Title (fr)

AMORCES OLIGONUCLEOTIDIQUES DESTABILISANT LA FORMATION DE DUPLEX NON SPECIFIQUES ET LEURS UTILISATIONS

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Application

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Abstract (en)

[origin: WO0020630A1] The present invention relates to the demonstration that a modification of a homopolymeric stretch in an oligonucleotide, or primer, improves the discrimination for binding of such a modified oligonucleotide or primer to its complementary homopolymeric target sequence, as compared to a non-homopolymeric sequence. More specifically, an oligo d(T) primer having two of the thymine bases substituted by 3-nitropyrrrole were used in a poly A primed cDNA synthesis experiment to demonstrate an improvement in discrimination between the priming of cDNA synthesis from bona fide poly A sequence as compared to internal A-rich sequences. The present invention relates to modifications of homopolymeric sequences in oligos, decreasing the ridging bonding capacity, in general, since other modifications, such as an oligo d(T) primer substituted with 2' deoxyinosine was also shown to improve the discrimination between the binding to a bona fide poly A tail as compared to A-rich sequences. The present invention thus relates to universal primers which reduce mispriming during cDNA library construction, thereby increasing the proportion of cDNA clones having been primed from the bona fide 3' poly A tail. The present invention further relates to the use of the discriminating oligonucleotides of the present invention in other methods such as mRNA purification, PCR-based detection methods and sequencing.

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