

Title (en)
METHODS FOR CLEAVING DNA WITH NUCLEOTIDE INTEGRASES

Title (de)
VERFAHREN ZUR SPALTUNG VON DNA MITTELS NUKLEOTID-INTEGRASEN

Title (fr)
PROCEDE DE CLIVAGE D'ADN AU MOYEN D'INTEGRASES NUCLEOTIDIQUES

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Abstract (en)
[origin: CA2282737A1] The present invention provides methods, using a nucleotide integrase, for cleaving nucleic acids substrates at specific sites and inserting a nucleic acid molecule into the cleaved substrate. The method of cleaving one strand of a double-stranded DNA substrate comprises providing a nucleotide integrase comprising a group II-intron RNA having two hybridizing sequences capable of hybridizing with two intron RNA binding sequences on the one strand of the substrate and a group II-intron encoded protein which binds to a first sequence element of the substrate. The method of cleaving both strands of a double-stranded DNA substrate comprises providing a nucleotide integrase comprising a group II-intron RNA having two hybridizing sequences capable of hybridizing with two intron RNA binding sequences on one strand of the substrate and a group II-intron encoded protein capable of binding to first and second sequence elements in the recognition site of the substrate. The method of cleaving a single-stranded nucleic acid substrate comprises providing an integrase having two hybridizing sequences capable of hybridizing with two intron RNA-binding sequences of the substrate and a group II-intron encoded protein.

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