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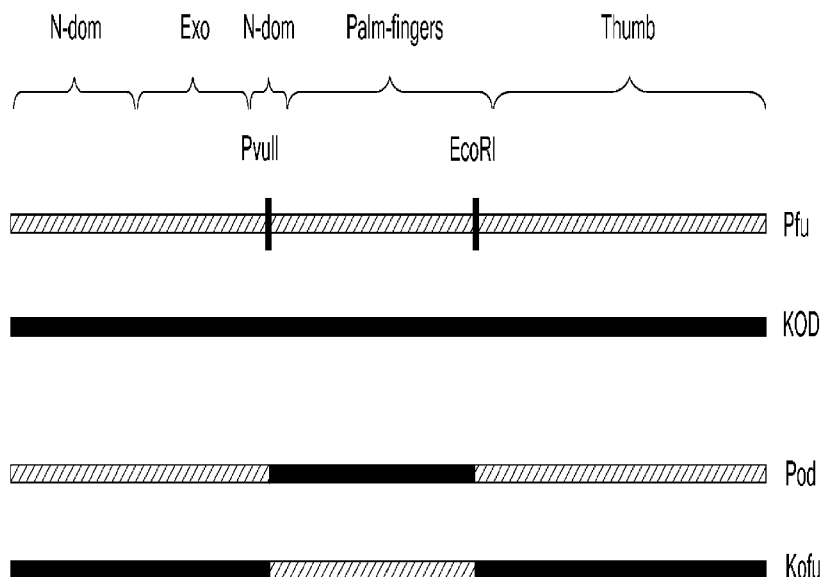
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(54) Title: CHIMERIC DNA POLYMERASES



(57) Abstract: The present invention provides, among other things, chimeric DNA polymerases containing heterologous domains having sequences derived from at least two DNA polymerases that have at least one distinct functional characteristics (e.g., elongation rate, processivity, error rate or fidelity, salt tolerance or resistance) and methods of making and using the same. In some embodiments, the present invention can combine desired functional characteristics (e.g., high processivity; high elongation rate; thermostability; resistance to salt, PCR additives (e.g., PCR enhancers) and other impurities; and high fidelity) of different DNA polymerases in a chimeric polymerase.

FIG. 2



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A. CLASSIFICATION OF SUBJECT MATTER*C12N 9/12(2006.01)i, C12N 15/54(2006.01)i*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

e-KOMPASS(KIPO Internal), PubMed NCBI, Google.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X/Y	WO 2004-058942 A2 (Stratagene) July 15, 2004 (See page 14, claims 1, 20 to 22, and 38)	1-8, 23-29 31-46/ 9-16, 31-36
X/Y	NCBI database 1WNS_A (Aug. 9, 2004)	18, 31-36/ 9-15, 31-36
Y	US 5,948,663 A (Stratagene) Sep. 7, 1999 (See SEQ ID NO. 1, columns 3 to 6, claims 1 to 4.)	16, 31-36
X	NCBI database NP_577941 (Feb. 26, 2002)	30, 31-36
X/Y	US 6,225,065 B1 (Toyo Boseki Kabushiki kaisha, May 1, 2001 (See abstract, columns 3 to 8, SEQ ID NO. 1, claims 1 to 6)	18, 31-36/ 9-15, 31-36
X/Y	WO 2001-018213 (DZIEGLEWSKA, Hanna) Mar. 15, 2001 (See abstract and claims 1 to 7.)	1-8, 23-29, 31-46/ 9-16, 31-36
X/Y	WO 2001-061015 A2 (QIAGEN GMBH) Aug. 23, 2001 (See abstract, and claims 1 to 8.)	1-8, 23-29, 31-46/ 9-16, 31-36



Further documents are listed in the continuation of Box C.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2009/063166

Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of :

a. a sequence listing filed or furnished

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on paper

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b. time of filing or furnishing

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contained in the international application as filed

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3. Additional comments:

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2009/063166

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