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(54) Title: CHROMOSOME-WIDE ANALYSIS OF PROTEIN-DNA INTERACTIONS

(57) Abstract: The present invention relates to a method of identifying a region (one or more) of a genome of a cell to which a protein of interest binds. In the methods decribed herein, DNA binding protein of a cell is linked (e.g. covalently crosslinked) to genomic DNA of a cell. The genomic DNA to which the DNA binding protein is linked is removed and combined or contacted with DNA comprising a sequence complementary to genomic DNA of the cell under conditions in which hybridization between the identified genomic DNA and the sequence complementary to genomic DNA occurs. Region(s) of hybridization are region(s) of the genome of the cell to which the protein binds.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12Q1/68 G01N33/68

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 7 C12Q G01N

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 practical, search terms used)
BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BLAT Y ET AL: "Cohesins bind ti preferential sites along yeast chromosome III, with differential regulation along arms versus centric region" CELL, vol. 98, July 1999 (1999-07), pages 249-59, XP002170838 page 250, paragraph 3 -page 252; figure 1 page 257, paragraph 3 -page 258, paragraph 2 ---	1-11
A	HECHT A ET AL: "Spreading of transcriptional repressor SIR3 from telomeric heterochromatin" NATURE, vol. 383, 5 September 1996 (1996-09-05), pages 92-96, XP002170839 the whole document ---	1-11

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[X] Further documents are listed in the continuation of box C. [ ] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
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"P" document published prior to the international filing date but later than the priority date claimed
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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
T	REN B ET AL: "Genome-wide location and function of DNA binding proteins" CELL, vol. 290, December 2000 (2000-12), pages 2306-309, XP002170840 the whole document	1-11

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