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(54) Title: METHODS AND COMPOSITIONS FOR SIGNAL ENHANCEMENT USING MULTIVALENT INTERACTIONS

(57) Abstract: Methods and materials are disclosed relating to an improved method for amplifying a signal in a diagnostic assay for an analyte, using an amplification polymer that multivalently binds to one or more non-analyte-specific binding site of the multivalent bridge conjugate, if present on the solid support.

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A. CLASSIFICATION OF SUBJECT MATTER

G01N 33/548(2006.01)i, G01N 33/549(2006.01)i, G01N 33/543(2006.01)i, C12Q 1/68(2006.01)i, G01N 33/547(2006.01)i, G01N 33/53(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 8 as above

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean Utility models and applications for Utility models since 1975

Japanese Utility models and application for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKIPASS (KIPO internal), Google, NCBI PubMed (signal, amplification, polymer, detection, dextran, biotin, streptavidin etc.)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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See patent family annex.

- * Special categories of cited documents:
- "A" document defining the general state of the art which is not considered to be of particular relevance
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- "O" document referring to an oral disclosure, use, exhibition or other means
- 'P" document published prior to the international filing date but later than the priority date claimed
- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "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

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2008/084990

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
A	M. BOCHER, et al. 'Synthesis of mono- and bifunctional peptide-dextran conjugates for the immobilization of peptide antigens on ELISA plates: properties and application.' In Journal of Immunological Methods Vol.208:191-202 (1997). See the whole document, especially figure 1.	1-57
Α	US 5,853,993 (D. J. DELLINGER, et al.) 29 December 1998. See the whole document, especially figures.	1-57
A	R. PEI, et al. 'Amplification of antigen-antibody interactions based on biotin labeled protein-streptavidin network complex using impedance spectroscopy.' In Biosensors & Bioelectronics Vol.16:355-361 (2001). See the whole document, especially figures.	1-57

INTERNATIONAL SEARCH REPORT

Information on patent family members

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