



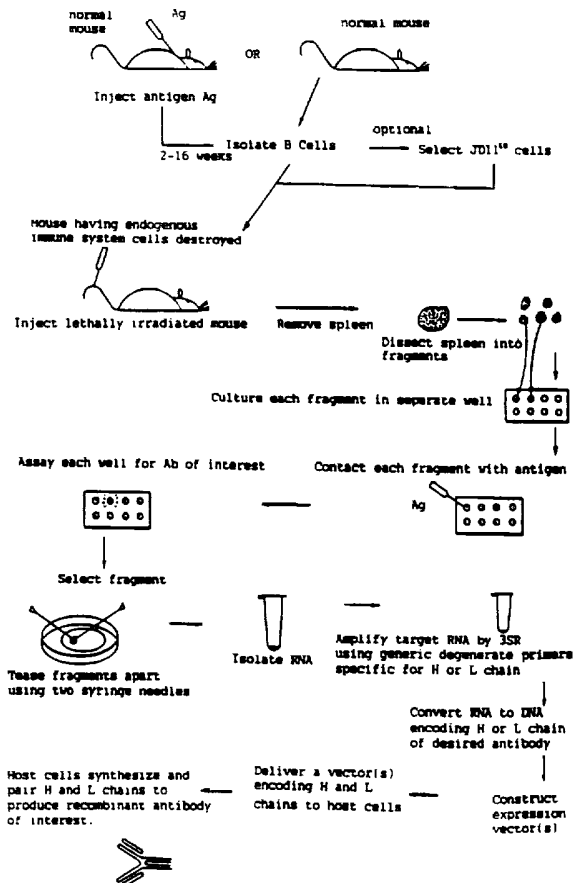
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(54) Title: PRODUCTION OF MONOCLONAL RECOMBINANT ANTIBODIES BY IN VITRO SPLEEN FRAGMENT CULTURE COMBINED WITH "3SR" TECHNIQUE

(57) Abstract

The invention is directed to a method for producing a recombinant protein having a preselected binding affinity and specificity for a given antigen. Generally, the method combines spleen fragment culture for the *in vitro* somatic mutation of B cells in response to antigen, followed by preferential amplification of RNA encoding heavy and light chains of desired antibodies produced by those B cells. The amplified RNA is then converted to DNA and incorporated into expression vectors; transfected host cells then express the antibody chains or a single chain antibody having preselected characteristics. Also disclosed are generic degenerate primer pools for the efficient amplification of RNA encoding mouse IgG.



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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 5 C12N15/12 C12N15/13 C12P21/08 C07K15/28 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 5 C12N C12Q

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)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	CELL vol. 59 , 22 December 1989 , CAMBRIDGE, NA US pages 1049 - 1059 LINTON, P-J. ET AL.; 'Primary antibody-forming cells and secondary B cells are generated from separate precursor cell populations' cited in the application see page 1056, column 2, line 64 - page 1057, column 1, line 21 ---	1-10, 22-29
Y	WO,A,92 08800 (SISKA DIAGNOSTICS, INC; US) 29 May 1992 see the whole document -----	1-10, 22-29

Further documents are listed in the continuation of box C.

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## INTERNATIONAL SEARCH REPORT

- information on patent family members

International Application No

PCT/US 93/11295

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO-A-9208800	29-05-92	AU-A- 9131591 EP-A- 0572417 FI-A- 932144	11-06-92 08-12-93 12-05-93
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