

## Title (en)

SINGLE CHAIN MONOCLONAL ANTIBODY FUSION REAGENTS THAT REGULATE TRANSCRIPTION IN VIVO

## Title (de)

EINKETTIGE MONOKLONAL-ANTIKÖRPER-FUSIONS-AGENTIEN DIE DIE IN VIVO TRANSKRIPTION REGULIEREN

## Title (fr)

REACTIFS DE FUSION D'ANTICORPS MONOCLONAL A CHAINE UNIQUE REGULANT UNE TRANSCRIPTION IN VIVO

## Publication

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## Application

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## Abstract (en)

[origin: WO9928502A1] A method of screening a DNA construct library for a single chain monoclonal antibody fusion reagent capable of binding a transcriptional associated biomolecule in vivo is described. Single chain monoclonal antibody fusion reagents capable of binding transcriptional associated biomolecules in vivo are provided. Single chain monoclonal antibody fusion reagents which are capable of regulating transcription in vivo are also provided. Therapeutic methods for regulating the transcription of a gene in vivo are also described. A method is further provided for screening a plurality of compounds for specific binding affinity with a single chain monoclonal antibody fusion reagent. A method is also described for diagnosing a physiological disorder manifested by an abnormal level of a transcription associated biomolecule. A DNA construct (pVP16Zeo) as well as primers for the construction and screening of single chain monoclonal antibody fusion reagent libraries to facilitate the isolation and production of single chain monoclonal antibody fusion reagents in yeast and E.coli are also provided. A kit for screening a DNA construct library for a single chain monoclonal antibody fusion reagent capable of binding a transcriptional associated biomolecule in vivo is also provided.

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## Citation (search report)

- [Y] WO 9630512 A1 19961003 - RHONE-POULENC RORER SA [FR], et al
- [A] WO 9602561 A1 19960201 - GEN HOSPITAL CORP [US], et al
- [A] EP 0557897 A1 19930901 - HOFFMANN LA ROCHE [CH]
- [T] WO 0054057 A1 20000914 - MEDICAL RES COUNCIL [GB], et al
- [T] WO 0148017 A1 20010705 - ESBATECH AG [CH], et al
- [XY] GARGANO N ET AL: "FROM PHAGE LIBRARIES TO INTRACELLULAR IMMUNIZATION", INTRACELLULAR ANTIBODIES: DEVELOPMENT AND APPLICATIONS, SPRINGER VERLAG, BERLIN, DE, 1997, pages 173 - 186, XP000916894
- [XY] MARASCO W A: "Intracellular antibodies (intrabodies) as research reagents and therapeutic molecules for gene therapy", IMMUNOTECHNOLOGY, ELSEVIER SCIENCE PUBLISHERS BV, NL, vol. 1, no. 1, 1 May 1995 (1995-05-01), pages 1 - 19, XP004052680, ISSN: 1380-2933
- [XY] MARASCO W: "Intrabodies: turning the humoral immune system outside in for intracellular immunization", GENE THERAPY, MACMILLAN PRESS LTD., BASINGSTOKE, GB, vol. 4, no. 1, January 1997 (1997-01-01), pages 11 - 15, XP002097642, ISSN: 0969-7128
- [XY] MHASHILKAR A M ET AL: "Inhibition of HIV-1 Tat-mediated LTR transactivation and HIV-1 infection by anti-Tat single chain intrabodies", EMBO JOURNAL, OXFORD UNIVERSITY PRESS, SURREY, GB, vol. 14, no. 7, 1995, pages 1542 - 1551, XP002089075, ISSN: 0261-4189
- [XY] HAARD DE H J W ET AL: "SELECTION OF RECOMBINANT, LIBRARY-DERIVED ANTIBODY FRAGMENTS AGAINST P24 FOR HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 DIAGNOSTICS", CLINICAL AND DIAGNOSTIC LABORATORY IMMUNOLOGY, AMERICAN SOCIETY FOR MICROBIOLOGY, US, vol. 5, no. 5, September 1998 (1998-09-01), pages 636 - 644, XP000939091, ISSN: 1071-412X
- [T] VISINTIN MICHELA ET AL: "Selection of antibodies for intracellular function using a two-hybrid in vivo system", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, NATIONAL ACADEMY OF SCIENCE, WASHINGTON, DC, US, vol. 96, no. 21, 12 October 1999 (1999-10-12), pages 11723 - 11728, XP002143442, ISSN: 0027-8424
- [T] DE JAEGER GEERT ET AL: "Analysis of the interaction between single-chain variable fragments and their antigen in a reducing intracellular environment using the two-hybrid system", FEBS LETTERS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 467, no. 2-3, 11 February 2000 (2000-02-11), pages 316 - 320, XP002143443, ISSN: 0014-5793
- [T] PORTNER-TALIANA A ET AL: "In vivo selection of single-chain antibodies using a yeast two-hybrid system", JOURNAL OF IMMUNOLOGICAL METHODS, ELSEVIER SCIENCE PUBLISHERS B.V., AMSTERDAM, NL, vol. 238, no. 1-2, April 2000 (2000-04-01), pages 161 - 172, XP004195472, ISSN: 0022-1759
- See references of WO 9928502A1

## Cited by

EP2314622A1; EP2332989A1; EP2947095A1; EP3656787A1

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