

Title (en)

METHOD OF MEASURING PROTEIN-PROTEIN INTERACTIONS IN LIVING CELLS

Title (de)

METHODEN ZUR MESSUNG VON PROTEIN-PROTEIN WECHSELWIRKUNGEN IN LEBENDEN ZELLEN

Title (fr)

PROCEDE DE MESURE DES INTERACTIONS PROTEINE-PROTEINE DANS DES CELLULES VIVANTES

Publication

EP 1115734 A4 20040721 (EN)

Application

EP 99942401 A 19990824

Priority

- US 9919118 W 19990824
- US 10163798 P 19980924

Abstract (en)

[origin: WO0017221A1] A method of detecting protein-protein interactions in a living cell comprises (a) providing a cell that contains a first heterologous conjugate and a second heterologous conjugate, wherein the first heterologous conjugate comprises a first protein of interest conjugated to a detectable group, and wherein the second heterologous conjugate comprises a second protein of interest conjugated to a protein that specifically binds to an internal structure within the cell, and then (b) detecting the presence or absence of binding of the detectable group to the internal structure, the presence of the binding indicating that the first and second proteins of interest specifically bind to one another. Additional aspects of the invention include nucleic acids encoding fusion proteins as described above, cells containing and expressing such fusion proteins, kits useful for carrying out the methods described above, and nucleic acid libraries useful as screening tools for carrying out the methods described above. The invention is useful for screening compounds for the ability to disrupt or inhibit the binding of known binding pairs and thereby identifying competitive inhibitors thereof. The invention is useful for screening one known protein of interest against a library of other proteins of interest to identify compounds that bind to the known protein of interest.

IPC 1-7

C07H 21/04; **C12Q 1/68**; **G01N 33/50**; **G01N 33/68**

IPC 8 full level

G01N 33/566 (2006.01); **C07K 19/00** (2006.01); **C12N 1/15** (2006.01); **C12N 1/19** (2006.01); **C12N 1/21** (2006.01); **C12N 5/10** (2006.01); **C12N 15/09** (2006.01); **C12N 15/10** (2006.01); **C12Q 1/02** (2006.01); **C12Q 1/48** (2006.01); **G01N 33/53** (2006.01); **G01N 37/00** (2006.01)

CPC (source: EP)

C12N 15/1055 (2013.01)

Citation (search report)

- [X] WO 9834120 A1 19980806 - UNIV MONTREAL [CA], et al
- [X] WO 9802571 A1 19980122 - UNIV CALIFORNIA [US], et al
- [Y] WO 9623898 A1 19960808 - NOVO NORDISK AS [DK], et al
- [Y] SAKAI ET AL: "Translocation of protein kinase C-gamma and epsilon - Direct visualization in living cells using fusion protein with green fluorescent protein", THE JOURNAL OF CELL BIOLOGY, ROCKEFELLER UNIVERSITY PRESS, US, 1997, XP002078902, ISSN: 0021-9525
- [XPY] BRODER Y C ET AL: "The ras recruitment system, a novel approach to the study of protein-protein interactions", CURRENT BIOLOGY, CURRENT SCIENCE, GB, vol. 8, no. 20, 8 October 1998 (1998-10-08), pages 1121 - 1124, XP002135902, ISSN: 0960-9822
- [PY] MAROUN M ET AL: "A NOVEL IN VIVO ASSAY FOR THE ANALYSIS OF PROTEIN-PROTEIN INTERACTION", NUCLEIC ACIDS RESEARCH, OXFORD UNIVERSITY PRESS, SURREY, GB, vol. 27, no. 13, 1999, pages COMPLETE, XP000904543, ISSN: 0305-1048
- See references of WO 0017221A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

WO 0017221 A1 20000330; **WO 0017221 A9 20000629**; AU 5578999 A 20000410; CA 2345392 A1 20000330; EP 1115734 A1 20010718; EP 1115734 A4 20040721; JP 2002526756 A 20020820

DOCDB simple family (application)

US 9919118 W 19990824; AU 5578999 A 19990824; CA 2345392 A 19990824; EP 99942401 A 19990824; JP 2000574129 A 19990824