

Title (en)

GENE EXPRESSION SYSTEM BASED ON CHIMERIC RECEPTORS

Title (de)

GENEXPRESSSIONSSYSTEM BASIEREND AUF CHIMÄREN REZEPTOREN

Title (fr)

SYSTEME D'EXPRESSION GENIQUE A BASE DE RECEPTEURS CHIMERES

Publication

**EP 1259537 A4 20040512 (EN)**

Application

**EP 01912956 A 20010223**

Priority

- US 0105750 W 20010223
- US 18459100 P 20000224

Abstract (en)

[origin: WO0162780A1] The invention provides a system for modulating the expression of a target gene in a subject wherein a defined response element for a DNA binding domain modulates expression of said target gene. The invention system comprises two chimeric proteins, each containing the dimerization domain of a member of the steroid/thyroid hormone nuclear receptor superfamily, one of which is non-endogenous to the subject. In addition, the first chimeric protein contains a DNA binding domain to which the target gene is responsive and the second chimeric protein contains a transcription modulating domain, such as a transcription activator or a transcription repressor. In one embodiment of the invention, two invention systems form a dimer having the properties of a native heterodimer or homodimer. In another embodiment, only the first chimeric protein contains a DNA binding domain and only the second chimeric protein contains a transcription activating domain. The functional entity formed by association of the first and second chimeric proteins can be designed to transactivate transcription by complexing with a DNA binding recognition site that does not have the 2-half site format common to response elements for members of the steroid/thyroid hormone nuclear receptor superfamily. Thus, certain of the invention systems cannot functionally interact with endogenous proteins in the way that wild type receptors do. The invention further provides nucleic acid sequences encoding the invention chimeric proteins, cells containing such nucleic acid sequences, and methods for using the invention chimeric proteins to modulate expression of one or more non-endogenous genes in a subject organism.

IPC 1-7

**C07K 14/00**; **C12N 5/00**; **C12N 15/10**; **C12N 15/62**; **C12N 15/63**; **C07K 14/705**; **C07K 14/72**

IPC 8 full level

**C12N 15/10** (2006.01); **C12N 15/12** (2006.01); **C12N 15/62** (2006.01); **C12N 15/63** (2006.01); **A61K 48/00** (2006.01)

CPC (source: EP)

**C12N 15/1055** (2013.01); **C12N 15/62** (2013.01); **C12N 15/63** (2013.01); **C12N 15/635** (2013.01); **A01K 2217/05** (2013.01); **A61K 48/00** (2013.01); **C07K 2319/20** (2013.01); **C07K 2319/81** (2013.01)

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- See references of WO 0162780A1

Designated contracting state (EPC)

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

DOCDB simple family (publication)

**WO 0162780 A1 20010830**; AU 4168201 A 20010903; EP 1259537 A1 20021127; EP 1259537 A4 20040512

DOCDB simple family (application)

**US 0105750 W 20010223**; AU 4168201 A 20010223; EP 01912956 A 20010223