

Title (en)

BIFUNCTIONAL SELECTABLE FUSION GENES BASED ON THE CYTOSINE DEAMINASE (CD) GENE

Title (de)

BIFUNKTIONELLE SELEKTIERBARE FUSIONSGENE AUF DEM CYTOSIN-DEAMINASE (CD) GEN BERUHEND

Title (fr)

GENES DE FUSION SELECTABLES ET BIFONCTIONNELS SE BASANT SUR LE GENE DE CYTOSINE-DEAMINASE (CD)

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Application

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Priority

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Abstract (en)

[origin: WO9428143A1] The invention provides selectable fusion genes including a dominant positive selectable gene fused to and in reading frame with a negative selectable gene. The selectable fusion gene encodes a single bifunctional fusion protein which is capable of conferring a dominant positive selectable phenotype and a negative selectable phenotype on a cellular host. A dominant negative selectable phenotype is conferred by the cytosine deaminase (CD) gene for 5-fluorocytosine sensitivity (5-FC<s>). A dominant positive selectable phenotype is conferred, for example, by the neo gene for G-418 aminoglycoside antibiotic resistance (G-418<r>), or by the hph gene for hygromycin B resistance (Hm<r>). The present invention also provides recombinant expression vectors, such as retroviral vectors, which include selectable fusion genes, and cells transduced with the recombinant expression vectors. The bifunctional selectable fusion genes are expressed and regulated as a single genetic entity, permitting co-regulation and co-expression with a high degree of efficiency.

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