Title (en)

SOLUBLE DERIVATIVES OF ANTI-ANGIOGENIC PEPTIDES

Title (de)

LÖSLICHE DERIVATE VON ANTI-ANGIOGENISCHEN PEPTIDEN

Title (fr)

DERIVES DE POLYPEPTIDES

Publication

EP 1097198 A2 20010509 (EN)

Application

EP 99934852 A 19990716

Priority

- GB 9902292 W 19990716
- GB 9815505 A 19980716

Abstract (en)

[origin: WO0004052A2] It has been found that derivatives of angiogenesis inhibiting proteins may be prepared in which a negative feedback process can be enhanced for therapeutic purposes and which can be targeted to cell membranes and sites of active angiogenesis particularly those of the vascular endothelium. The invention provides a soluble derivative of a polypeptide capable of inhibiting angiogenesis, said derivative comprising a combination of heterologous membrane binding elements covalently associated with the polypeptide so that the derivative acquires affinity for the surface of the vascular endothelium particularly that of growing blood vessels. The soluble polypeptide may be selected from the non-catalytic regions of human plasminogen (within the N-terminal 560 residues of that protein); fragments thereof, particularly those generated by metalloprotease digestion of plasminogen; fragments of related proteins containing kringle domains such as hepatocyte growth factor or apolipoprotein (a), prothrombin, tissue-type plasminogen activator, urinary-type plasminogen activator and hybrids thereof with plasminogen sequences; mutants of the above kringle domains, those containing positively charged to neutral or negatively charged mutations at positions 20, 21, 78 and 79; fragments of collagen, particularly collagen XVIII; fragments of prolactin, the 16kDa N-terminal region of prolactin; neutralising antibodies against receptors for angiogenic mediators; antagonists of integrins involved in angiogenesis; and hybrids, derivatives or muteins thereof. Each membrane binding element with low membrane affinity may have a dissociation constant of 1 mu M-1mM, and the derivative may incorporate sufficient elements with low affinities for membrane components to result in a 0.01 - 1OnM dissociation constant affinity for specific membranes.

IPC 1-7

C12N 15/11; C12N 9/68; C12N 9/72; C07K 14/775; C12N 9/74; C07K 14/78; C07K 14/575; A61K 47/48; C07K 16/36

IPC 8 full level

G01N 33/53 (2006.01); **A61K 47/48** (2006.01); **A61P 35/00** (2006.01); **A61P 35/04** (2006.01); **C07K 14/575** (2006.01); **C07K 14/775** (2006.01); **C07K 14/78** (2006.01); **C07K 16/36** (2006.01); **C12N 9/68** (2006.01); **C12N 9/72** (2006.01); **C12N 9/74** (2006.01); **C12N 15/09** (2006.01); A61K 38/00 (2006.01)

CPC (source: EP)

A61K 47/64 (2017.07); **A61P 35/00** (2017.12); **A61P 35/04** (2017.12); **C07K 14/57554** (2013.01); **C07K 14/775** (2013.01); **C07K 14/78** (2013.01); **C07K 16/36** (2013.01); **C12N 9/6429** (2013.01); **C12N 9/6435** (2013.01); **C12N 9/6456** (2013.01); **C12N 9/6459** (2013.01); **C12Y 304/21005** (2013.01); **C12Y 304/21007** (2013.01); **C12Y 304/21069** (2013.01); A61K 38/00 (2013.01)

Citation (search report)

See references of WO 0004052A2

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 0004052 A2 20000127; **WO 0004052 A3 20000420**; AU 5049599 A 20000207; CA 2333929 A1 20000127; EP 1097198 A2 20010509; GB 9815505 D0 19980916; JP 2002520044 A 20020709

DOCDB simple family (application)

GB 9902292 W 19990716; AU 5049599 A 19990716; CA 2333929 A 19990716; EP 99934852 A 19990716; GB 9815505 A 19980716; JP 2000560158 A 19990716