Patent Claims

1. A bispecific, bivalent antibody comprising a first antigen-binding site that specifically binds to human VEGF and a second antigen-binding site that specifically binds to human ANG-2, characterized in that

i) said first antigen-binding site comprises as heavy chain variable domain (VH) the SEQ ID NO: 1, and as light chain variable domain (VL) the SEQ ID NO: 2; and

ii) said second antigen-binding site comprises as heavy chain variable domain (VH) the SEQ ID NO: 3, and as light chain variable domain (VL) the SEQ ID NO: 4.;and further

~~2. The bispecific antibody according to claim 1,~~ characterized in comprising

a) the heavy chain and the light chain of a first full length antibody that specifically binds to VEGF;

b) the modified heavy chain and modified light chain of a full length antibody that specifically binds to ANG-2, wherein the constant domains CL and CH1 are replaced by each other.

~~3~~2. The bispecific antibody according to claim ~~2~~1, characterized in comprising

a) as heavy chain of the first full length antibody the SEQ ID NO: 7, and as light chain of the first full length antibody the SEQ ID NO: 5, and

b) as modified heavy chain of the second full length antibody the SEQ ID NO: 8, and as modified light chain of the second full length antibody the SEQ ID NO: 6.

~~4~~3. The bispecific antibody according to claim ~~2~~1, characterized in comprising

a) as heavy chain of the first full length antibody the SEQ ID NO: 11, and as light chain of the first full length antibody the SEQ ID NO: 9, and

b) as modified heavy chain of the second full length antibody the SEQ ID NO: 12, and as modified light chain of the second full length antibody the SEQ ID NO: 10.

~~5~~4. The bispecific antibody according to claim ~~2~~1, characterized in comprising

a) as heavy chain of the first full length antibody the SEQ ID NO: 15, and as light chain of the first full length antibody the SEQ ID NO: 13, and

b) as modified heavy chain of the second full length antibody the SEQ ID NO: 16, and as modified light chain of the second full length antibody the SEQ ID NO: 14.

~~6~~5. A pharmaceutical composition comprising an antibody according to claims 1 to ~~5~~4.

~~7~~6. The bispecific antibody according to any one of claims 1 to ~~5~~4 for the treatment of cancer.

~~8~~7. ~~The~~ Use of the bispecific antibody according to any one of claims 1 to ~~5~~4 for the manufacture of a medicament for the treatment of cancer.

~~9~~8. The bispecific antibody according to any one of claims 1 to ~~5~~4 for use in the treatment of ~~vascular diseases~~ a condition selected from intraocular neovascular syndromes, rheumatoid arthritis or psoriasis.

9. The bispecific antibody for use according to claim 8, which is for use in the treatment of proliferative retinopathy or age-related macular degeneration

10. ~~The~~ Use of the bispecific antibody according to any one of claims 1 to ~~5~~4 for the manufacture of a medicament for the treatment of ~~vascular diseases~~ a condition selected from intraocular neovascular syndromes, rheumatoid arthritis or psoriasis.

11. Use according to claim 10, wherein the medicament is for the treatment of proliferative retinopathy or age-related macular degeneration.

~~11~~12. A nucleic acid encoding a bispecific antibody according to any one of claims 1 to ~~5~~4 .

~~12~~13. Expression vector containing said nucleic acid according to claim ~~11~~12 capable of expressing said nucleic acid in a prokaryotic or eukaryotic host cell.

~~13~~14. A prokaryotic or eukaryotic host cell comprising a vector according to claim ~~12~~13.

~~14~~15. A method for the preparation of a bispecific antibody according to claims 1 to ~~5~~4

comprising the steps of

a) transforming a host cell with vectors comprising nucleic acid molecules encoding said antibody;

b) culturing the host cell under conditions that allow synthesis of said antibody molecule; and

c) recovering said antibody molecule from said culture.

~~15~~16. A bispecific antibody obtained by the method of claim ~~14~~15.

~~16. A bispecific, bivalent antibody comprising a first antigen-binding site that specifically binds to human VEGF and a second antigen-binding site that specifically binds to human ANG-2, characterized in comprising the amino acid sequences of SEQ ID NO: 5, of SEQ ID NO: 6, of SEQ ID NO: 7, and of SEQ ID NO: 8.~~

~~17. A bispecific, bivalent antibody comprising a first antigen-binding site that specifically binds to human VEGF and a second antigen-binding site that specifically binds to human ANG-2, characterized in comprising the amino acid sequences of SEQ ID NO: 9, of SEQ ID NO: 10, of SEQ ID NO: 11, and of SEQ ID NO: 12.~~

~~18. A bispecific, bivalent antibody comprising a first antigen-binding site that specifically binds to human VEGF and a second antigen-binding site that specifically binds to human ANG-2, characterized in comprising the amino acid sequences of SEQ ID NO: 13, of SEQ ID NO: 14, of SEQ ID NO: 15, and of SEQ ID NO: 16.~~