CLAIMS

1. An isolated single-domain antibody (sdAb) binding specifically to the C-terminal SHBG-like domain of protein S (PS) enhancing the APC-cofactor activity of PS, wherein said sdAb comprises a CDR1 having a sequence set forth as SEQ ID NO: 1, a CDR2 having a sequence set forth as SEQ ID NO: 2 and a CDR3 having a sequence set forth as SEQ ID NO: 3.

2. The isolated single-domain antibody according to claims 1 to 3 which comprises a sequence set forth as SEQ ID NO:4.

3. A polypeptide comprising at least one single-domain antibody according to claim 1.

4. The polypeptide according to claim 3 which comprises at least two single-domain antibodies according to claim 1.

5. The polypeptide according to claim 3, comprising two single-domain antibodies according to claim 1.

6. The polypeptide according to claim 4 which comprises a sequence set forth as SEQ ID NO:5.

7. The polypeptide according to claim 3, wherein a single-domain antibody is linked to an Fc portion.

8. A nucleic acid molecule encoding the single-domain antibody of claim 1 and/or a polypeptide of claim 3.

9. A vector that comprises the nucleic acid of claim 8.

10. A host cell which has been transfected, infected or transformed by the nucleic acid of claim 8 and/or the vector of claim 9.

11. Use of the single-domain antibody of claim 1 and/or the polypeptide of claim 3 in the manufacture of a medicament for the prevention or treatment of thrombotic disorders.

12. Use of the single-domain antibody of claim 1 and/or the polypeptide of claim 3 in the manufacture of a medicament for the prevention or treatment of vaso-occlusive crisis.

13. The use of claim 11, wherein the thrombotic disorders is sepsis, sickle-cell anemia; embolism (pulmonary and cerebral), stroke or cardiovascular disease.

14. Use of the single-domain antibody of claim 1 and/or the polypeptide of claim 3 in the manufacture of a medicament for the prevention or treatment of thrombophilia.

15. A pharmaceutical composition comprising the single-domain antibody of claim 1 and/or the polypeptide of claim 3.

16. The single-domain antibody of claim 1 and/or the polypeptide of claim 3 for use in therapy.