CLAIMS

1. An isolated single-domain antibody (sdAb) directed against protein S (PS) enhancing the APC-cofactor activity of PS.

2. The isolated single-domain antibody according to claim 1, 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.

3. The isolated single-domain antibody according to claim 1 or 2 having at least 70% identity with a sequence set forth as SEQ ID NO:4

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

5. A cross-competing single-domain antibody which cross-competes for binding PS with the single domain antibody according to claim 1.

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

7. The polypeptide according to claim 6 which comprises at least two single-domain antibodies according to claim 1.

8. The polypeptide according to claim 6, comprising two single-domain antibodies according to claim 1.

9. The polypeptide according to claim 7 which comprises a sequence set forth as SEQ ID NO:5.

10. A nucleic acid molecule encoding the single-domain antibody of claim 1 and/or a polypeptide of claim 6.

11. A vector that comprises the nucleic acid of claim 10.

12. A host cell which has been transfected, infected or transformed by the nucleic acid of claim 10 and/or the vector of claim 11.

13. Use of the single-domain antibody of claim 1 and/or the polypeptide of claim 6 in the manufacture of a medicament for the prevention or treatment of thrombotic disorders.

14. Use of the single-domain antibody of claim 1 and/or the polypeptide of claim 6 in the manufacture of a medicament for the prevention or treatment of vaso-occlusive crisis.

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

16. A pharmaceutical composition comprising the single-domain antibody of claim 1 and/or the polypeptide of claim 6.

17. The single-domain antibody of claim 1 and/or the polypeptide of claim 6 for use in therapy.