

CLAIMS

1. A polypeptide, a composition comprising the polypeptide, or a composition comprising a nucleic acid comprising a nucleotide sequence that encodes the polypeptide, for use as a medicament, wherein the polypeptide specifically binds TNF α and the p19 subunit of IL-23, and wherein the polypeptide comprises or consists of at least three immunoglobulin single variable domains (ISVDs), wherein each of said ISVDs comprises three complementarity determining regions (CDR1 to CDR3, respectively), optionally linked via one or more peptidic linkers; and wherein:
- 5 a) a first ISVD comprises
- 10 i. a CDR1 that is the amino acid sequence of SEQ ID NO: 6 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 6;
- ii. a CDR2 that is the amino acid sequence of SEQ ID NO: 10 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 10; and
- 15 iii. a CDR3 that is the amino acid sequence of SEQ ID NO: 14 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 14;
- b) a second ISVD comprises
- iv. a CDR1 that is the amino acid sequence of SEQ ID NO: 7 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 7;
- 20 v. a CDR2 that is the amino acid sequence of SEQ ID NO: 11 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 11; and
- vi. a CDR3 that is the amino acid sequence of SEQ ID NO: 15 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 15; and
- c) a third ISVD comprises
- 25 vii. a CDR1 that is the amino acid sequence of SEQ ID NO: 9 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 9;
- viii. a CDR2 that is the amino acid sequence of SEQ ID NO: 13 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 13; and

- ix. a CDR3 that is the amino acid sequence of SEQ ID NO: 17 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 17.
2. The polypeptide or composition for use according to claim 1, wherein:
- 5 a) the amino acid sequence of said first ISVD comprises a sequence identity of more than 90% with SEQ ID NO: 2;
- b) the amino acid sequence of said second ISVD comprises a sequence identity of more than 90% with SEQ ID NO: 3; and
- c) the amino acid sequence of said third ISVD comprises a sequence identity of more than 90% identity with SEQ ID NO: 5.
- 10 3. The polypeptide or composition for use according to any of claims 1 to 2, wherein:
- a) said first ISVD consists of the amino acid sequence of SEQ ID NO: 2;
- b) said second ISVD consists of the amino acid sequence of SEQ ID NO: 3; and
- c) said third ISVD consists of the amino acid sequence of SEQ ID NO: 5.
- 15 4. The polypeptide or composition for use according to any of claims 1 to 3, wherein said polypeptide further comprises an ISVD binding to human serum albumin which comprises
- 20 i. a CDR1 that is the amino acid sequence of SEQ ID NO: 8 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 8;
- ii. a CDR2 that is the amino acid sequence of SEQ ID NO: 12 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 12; and
- iii. a CDR3 that is the amino acid sequence of SEQ ID NO: 16 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 16.

5. The polypeptide or composition for use according to claim 4, wherein the amino acid sequence of said ISVD binding to human serum albumin comprises a sequence identity of more than 90% with SEQ ID NO: 4.
6. The polypeptide or composition for use according to any of claims 1 to 5,
5 wherein the polypeptide comprises or consists of the amino acid sequence of SEQ ID NO: 1.
7. The polypeptide or composition for use according to any of claims 1 to 6, for use in the treatment of an autoimmune or an inflammatory disease.
8. The polypeptide or composition for use according to claim 7, wherein the
10 autoimmune or inflammatory disease is selected from inflammatory bowel disease (such as Crohn's disease or ulcerative colitis), psoriasis, psoriatic arthritis and Hidradenitis suppurativa.
9. A polypeptide that comprises or consists of at least three immunoglobulin single variable domains (ISVDs), wherein each of said ISVDs comprises three complementarity
15 determining regions (CDR1 to CDR3, respectively), optionally linked via one or more peptidic linkers; and wherein:
- a) a first ISVD comprises
- i. a CDR1 that is the amino acid sequence of SEQ ID NO: 6 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 6;
- 20 ii. a CDR2 that is the amino acid sequence of SEQ ID NO: 10 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 10; and
- iii. a CDR3 that is the amino acid sequence of SEQ ID NO: 14 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 14;
- b) a second ISVD comprises
- 25 iv. a CDR1 that is the amino acid sequence of SEQ ID NO: 7 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 7;

- v. a CDR2 that is the amino acid sequence of SEQ ID NO: 11 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 11; and
 - vi. a CDR3 that is the amino acid sequence of SEQ ID NO: 15 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 15; and
- 5 c) a third ISVD comprises
 - vii. a CDR1 that is the amino acid sequence of SEQ ID NO: 9 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 9;
 - viii. a CDR2 that is the amino acid sequence of SEQ ID NO: 13 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 13; and
 - 10 ix. a CDR3 that is the amino acid sequence of SEQ ID NO: 17 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 17.
- 10. The polypeptide according to claim 9, wherein:
 - a) the amino acid sequence of said first ISVD comprises a sequence identity of more than 90% with SEQ ID NO: 2;
 - 15 b) the amino acid sequence of said second ISVD comprises a sequence identity of more than 90% with SEQ ID NO: 3; and
 - c) the amino acid sequence of said third ISVD comprises a sequence identity of more than 90% identity with SEQ ID NO: 5.
- 11. The polypeptide according to any of claims 9 to 10, wherein:
 - 20 a) said first ISVD consists of the amino acid sequence of SEQ ID NO: 2;
 - b) said second ISVD consists of the amino acid sequence of SEQ ID NO: 3; and
 - c) said third ISVD consists of the amino acid sequence of SEQ ID NO: 5.
- 12. The polypeptide according to any of claims 9 to 11, wherein said polypeptide further comprises an ISVD binding to human serum albumin which comprises
 - 25 i. a CDR1 that is the amino acid sequence of SEQ ID NO: 8 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 8;

- ii. a CDR2 that is the amino acid sequence of SEQ ID NO: 12 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 12; and
 - iii. a CDR3 that is the amino acid sequence of SEQ ID NO: 16 or an amino acid sequence with 2 or 1 amino acid difference(s) with SEQ ID NO: 16.
- 5 13. The polypeptide according to claim 12, wherein the amino acid sequence of said ISVD binding to human serum albumin comprises a sequence identity of more than 90% with SEQ ID NO: 4.
14. The polypeptide according to any of claims 9 to 13, wherein the polypeptide comprises or consists of the amino acid sequence of SEQ ID NO: 1.
- 10 15. A nucleic acid comprising a nucleotide sequence that encodes a polypeptide according to any of claims 9 to 14.
16. A host or host cell comprising a nucleic acid according to claim 15.
17. A method for producing a polypeptide according to any of claims 9 to 14, said method at least comprising the steps of:
- 15 a) expressing, in a suitable host cell or host organism or in another suitable expression system, a nucleic acid according to claim 15; optionally followed by:
- b) isolating and/or purifying the polypeptide according to any of claims 9 to 14.
- 20 18. A composition comprising at least one polypeptide according to any of claims 9 to 14, or a nucleic acid according to claim 15.