

Claims:

[\[Claim 1\]](#). An antigen-binding molecule, optionally isolated, which is capable of binding to IL-11, wherein the antigen-binding molecule comprises:

(i) a heavy chain variable (VH) region incorporating the following CDRs:

HC-CDR1 having the amino acid sequence of SEQ ID NO:37

HC-CDR2 having the amino acid sequence of SEQ ID NO:38

HC-CDR3 having the amino acid sequence of SEQ ID NO:40; and

(ii) a light chain variable (VL) region incorporating the following CDRs:

LC-CDR1 having the amino acid sequence of SEQ ID NO:42

LC-CDR2 having the amino acid sequence of SEQ ID NO:45

LC-CDR3 having the amino acid sequence of SEQ ID NO:81.

[\[Claim 2\]](#). The antigen-binding molecule according to claim 1, wherein the antigen-binding molecule comprises:

(i) a heavy chain variable (VH) region incorporating the following CDRs:

HC-CDR1 having the amino acid sequence of SEQ ID NO:37

HC-CDR2 having the amino acid sequence of SEQ ID NO:38

HC-CDR3 having the amino acid sequence of SEQ ID NO:40; and

(ii) a light chain variable (VL) region incorporating the following CDRs:

LC-CDR1 having the amino acid sequence of SEQ ID NO:42

LC-CDR2 having the amino acid sequence of SEQ ID NO:45

LC-CDR3 having the amino acid sequence of SEQ ID NO:57;

[\[Claim 3\]](#). The antigen-binding molecule according to claim 1 or claim 2, wherein the antigen-binding molecule comprises:

a VH region comprising an amino acid sequence having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:8; and

a VL region comprising an amino acid sequence having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:83.

[\[Claim 4\]](#). The antigen-binding molecule according to claim 3, wherein the antigen-binding molecule comprises:

a VH region comprising an amino acid sequence having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:8; and

a VL region comprising an amino acid sequence having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:20.

[\[Claim 5\]](#). An antigen-binding molecule, optionally isolated, which is capable of binding to IL-11, wherein the antigen-binding molecule comprises:

(i) a heavy chain variable (VH) region incorporating the following CDRs:

HC-CDR1 having the amino acid sequence of SEQ ID NO:95

HC-CDR2 having the amino acid sequence of SEQ ID NO:96

HC-CDR3 having the amino acid sequence of SEQ ID NO:97, or a variant thereof in which one or two or three amino acids in one or more of HC-CDR1, HC-CDR2, or HC-CDR3 are substituted with another amino acid; and

(ii) a light chain variable (VL) region incorporating the following CDRs:

LC-CDR1 having the amino acid sequence of SEQ ID NO:101

LC-CDR2 having the amino acid sequence of SEQ ID NO:102

LC-CDR3 having the amino acid sequence of SEQ ID NO:103, or a variant thereof in which one or two or three amino acids in one or more of LC-CDR1, LC-CDR2, or LC-CDR3 are substituted with another amino acid.

[Claim 6]. The antigen-binding molecule according to claim 5, wherein the antigen-binding molecule comprises:

(i) a heavy chain variable (VH) region incorporating the following CDRs:

HC-CDR1 having the amino acid sequence of SEQ ID NO:95

HC-CDR2 having the amino acid sequence of SEQ ID NO:96 or a variant of SEQ ID NO:96 comprising one amino acid substitution

HC-CDR3 having the amino acid sequence of SEQ ID NO:97; and

(ii) a light chain variable (VL) region incorporating the following CDRs:

LC-CDR1 having the amino acid sequence of SEQ ID NO:101

LC-CDR2 having the amino acid sequence of SEQ ID NO:102 or a variant of SEQ ID NO:102 comprising one amino acid substitution

LC-CDR3 having the amino acid sequence of SEQ ID NO:103.

[Claim 67]. The antigen-binding molecule according to claim 5 or claim 6, wherein the antigen-binding molecule comprises:

(i) a heavy chain variable (VH) region incorporating the following CDRs:

HC-CDR1 having the amino acid sequence of SEQ ID NO:95

HC-CDR2 having the amino acid sequence of SEQ ID NO:96

HC-CDR3 having the amino acid sequence of SEQ ID NO:97; and

(ii) a light chain variable (VL) region incorporating the following CDRs:

LC-CDR1 having the amino acid sequence of SEQ ID NO:101

LC-CDR2 having the amino acid sequence of SEQ ID NO:102

LC-CDR3 having the amino acid sequence of SEQ ID NO:103.

[Claim 78]. The antigen-binding molecule according to any one of claims 5 to claim 67, wherein the antigen-binding molecule comprises:

a VH region comprising an amino acid sequence having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:92, 116, 117, 118, 119 or 120; and

a VL region comprising an amino acid sequence having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:94, 124, 122, 123, 124, 125, 126, 127 or 128.

[Claim 89]. The antigen-binding molecule according to any one of claims 5 to 78, wherein the antigen-binding molecule comprises:

a VH region comprising an amino acid sequence having at least 90% sequence identity to the amino acid sequence of SEQ ID NO:92, 116, 117, 118, 119 or 120; and

a VL region comprising an amino acid sequence having at least 90% sequence identity to the amino acid sequence of SEQ ID NO:94, 121, 122, 123, 124, 125, 126, 127 or 128.

[Claim 10]. The antigen-binding molecule according to any one of claims 5 to 9, wherein the antigen-binding molecule comprises:

a VH region incorporating the following framework regions (FRs):

HC-FR1 having the amino acid sequence of SEQ ID NO:130;

HC-FR2 having the amino acid sequence of SEQ ID NO:133;

HC-FR3 having the amino acid sequence of SEQ ID NO:137; and

HC-FR4 having the amino acid sequence of SEQ ID NO:140.

[Claim 11]. The antigen-binding molecule according to any one of claims 5 to 10, wherein the antigen-binding molecule comprises:

a VL region incorporating the following framework regions (FRs):

LC-FR1 having the amino acid sequence of SEQ ID NO:141;

LC-FR2 having the amino acid sequence of SEQ ID NO:145;

LC-FR3 having the amino acid sequence of SEQ ID NO:147; and

LC-FR4 having the amino acid sequence of SEQ ID NO:149.

[Claim 12]. The antigen-binding molecule according to any one of claims 1 to 11, wherein the antigen-binding molecule comprises a heavy chain constant sequence comprising: a CH1 region having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:86, a CH1-CH2 hinge region having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:87, a CH2 region having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:88, and a CH3 region having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:89.

[Claim 13]. The antigen-binding molecule according to any one of claims 1 to 12, wherein the antigen-binding molecule comprises a light chain constant sequence having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:90.

9. The antigen-binding molecule according to any one of claims 5 to 7, wherein the antigen-binding molecule comprises:

—— a VH region comprising an amino acid sequence having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:117; and

—— a VL region comprising an amino acid sequence having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:122.

~~10. The antigen-binding molecule according to any one of claims 5 to 7, wherein the antigen-binding molecule comprises:~~

~~—— a VH region comprising an amino acid sequence having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:117; and~~

~~—— a VL region comprising an amino acid sequence having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:121.~~

[\[Claim 4414\]](#). The antigen-binding molecule according to any one of claims 1 to [4013](#), wherein the antigen-binding molecule is capable of inhibiting IL-11 mediated signalling.

[\[Claim 4215\]](#). An antigen-binding molecule, optionally isolated, comprising (i) an antigen-binding molecule according to any one of claims 1 to [4414](#), and (ii) an antigen-binding molecule capable of binding to an antigen other than IL-11.

[\[Claim 4316\]](#). The antigen-binding molecule according to any one of claims 1 to [4215](#), wherein the antigen-binding molecule is capable of inhibiting interaction between IL-11 or a complex comprising IL-11 and an IL-11 receptor.

[\[Claim 4417\]](#). A chimeric antigen receptor (CAR) comprising an antigen-binding molecule according to any one of claims 1 to [4316](#).

[\[Claim 4518\]](#). A nucleic acid, or a plurality of nucleic acids, optionally isolated, encoding an antigen-binding molecule according to any one of claims 1 to [43-16](#) or a CAR according to claim [4417](#).

[\[Claim 4619\]](#). An expression vector, or a plurality of expression vectors, comprising a nucleic acid or a plurality of nucleic acids according to claim [4518](#).

[\[Claim 4720\]](#). A cell comprising an antigen-binding molecule according to any one of claims 1 to [4316](#), a CAR according to claim [4417](#), a nucleic acid or a plurality of nucleic acids according to claim 15, or an expression vector or a plurality of expression vectors according to claim [4619](#).

[\[Claim 4821\]](#). A method comprising culturing a cell comprising a nucleic acid or a plurality of nucleic acids according to claim [4518](#), or an expression vector or a plurality of expression vectors according to claim [4619](#), under conditions suitable for expression of the antigen-binding molecule or CAR from the nucleic acid(s) or expression vector(s).

[\[Claim 4922\]](#). A composition comprising an antigen-binding molecule according to any one of claims 1 to [4316](#), a CAR according to claim [4417](#), a nucleic acid or a plurality of nucleic acids according to claim [4518](#), an expression vector or a plurality of expression vectors according to claim [4619](#), or a cell according to claim [4720](#).

[\[Claim 2023\]](#). An antigen-binding molecule according to any one of claims 1 to [4316](#), a CAR according to claim [4417](#), a nucleic acid or a plurality of nucleic acids according to claim [4518](#), an expression vector or a plurality of

expression vectors according to claim [4619](#), a cell according to claim [4720](#), or a composition according to claim [4922](#) for use in a method of medical treatment or prophylaxis.

[\[Claim 2124\]](#). ~~An Use of an~~ antigen-binding molecule according to any one of claims 1 to [4316](#), a CAR according to claim [4417](#), a nucleic acid or a plurality of nucleic acids according to claim [4518](#), an expression vector or a plurality of expression vectors according to claim [4619](#), a cell according to claim [4720](#), or a composition according to claim [4922](#), [in the manufacture of a medicament](#) for ~~use in a method of~~ treatment or prevention of fibrosis, a disease characterised by fibrosis, a cancer, inflammation, a disease characterised by inflammation, hepatotoxicity, a disease characterised by hepatotoxicity, a metabolic disease, a wasting disorder, kidney injury, [or](#) nephrotoxicity ~~or a disease characterised by hepatotoxicity~~.

[\[Claim 2225\]](#). A method of inhibiting IL-11 mediated signalling, comprising contacting IL-11-expressing cells [in vitro](#) with an antigen-binding molecule according to any one of claims 1 to [4316](#).

[\[Claim 2326\]](#). An *in vitro* complex, optionally isolated, comprising an antigen-binding molecule according to any one of claims 1 to [4316](#) bound to IL-11 or a complex comprising IL-11.

[\[Claim 2427\]](#). A method comprising contacting a sample containing, or suspected to contain, IL-11 or a complex comprising IL-11 with an antigen-binding molecule according to any one of claims 1 to [4316](#), and detecting the formation of a complex of the antigen-binding molecule with IL-11 or a complex comprising IL-11.

[\[Claim 2528\]](#). A method of selecting or stratifying a subject for treatment with an IL-11-targeted agent, the method comprising contacting, *in vitro*, a sample from the subject with an antigen-binding molecule according to any one of claims 1 to [4316](#) and detecting the formation of a complex of the antigen-binding molecule with IL-11 or a complex comprising IL-11.

[\[Claim 2629\]](#). Use of an antigen-binding molecule according to any one of claims 1 to [4316](#) as an *in vitro* ~~or~~ *in vivo* diagnostic or prognostic agent.

[\[Claim 2730\]](#). A kit of parts comprising a predetermined quantity of: an antigen-binding molecule according to any one of claims 1 to [4316](#), a CAR according to claim [4417](#), a nucleic acid or a plurality of nucleic acids according to claim [4518](#), an expression vector or a plurality of expression vectors according to claim [4619](#), a cell according to claim [4720](#), or a composition according to claim [4922](#).