

CLAIMS

1. An anti-Sclerostin construct comprising an antibody moiety that specifically recognizes Sclerostin, wherein the antibody moiety binds to an epitope on Sclerostin, wherein the epitope comprises the amino acid sequence set forth in
5 SEQ ID NO: 186.
2. An anti-Sclerostin construct comprising an antibody moiety that specifically recognizes Sclerostin, wherein the antibody moiety comprises a heavy chain variable region (V_H) and a light chain variable region (V_L), wherein:
the V_H comprises a HC-CDR1 comprising the amino acid sequence of any one
10 of SEQ ID NOs: 1-4 and 12, a HC-CDR2 comprising the amino acid sequence of any one of SEQ ID NOs: 5-8 and 13, and a HC-CDR3 comprising the amino acid sequence of any one of SEQ ID NOs: 9-11 and 14, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in the HC-CDRs; and
the V_L comprises a LC-CDR1 comprising the amino acid sequence of any one
15 of SEQ ID NOs: 15-17, 85, and 86, a LC-CDR2 comprising the amino acid sequence of any one of SEQ ID NOs: 18 and 19, and a LC-CDR3 comprising the amino acid sequence of any one of SEQ ID NOs: 20 and 21, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in the LC-CDRs;
20 preferably, wherein:
 - a) the V_H comprises the HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 12, the HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 13, and the HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 14; and the V_L comprises the LC-CDR1 comprising the amino acid
25 sequence of SEQ ID NO: 15 or 16, the LC-CDR2 comprising the amino acid

sequence of SEQ ID NO: 18, and the LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 20, or

- b) the V_H comprises the HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 1, the HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 5, and the HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 9; and the V_L comprises the LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 15, the LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and the LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 20;
- preferably, wherein the V_H comprises the HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 1, the HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 6, and the HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 10; and the V_L comprises the LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 15, the LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and the LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 20;
- preferably, wherein the V_H comprises the HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 2, the HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 7, and the HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 10; and the V_L comprises the LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 15, the LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and the LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 20;
- preferably, wherein the V_H comprises the HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 2, the HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 6, and the HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 10; and the V_L comprises the LC-CDR1 comprising the amino acid

sequence of SEQ ID NO: 15, the LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and the LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 20;

preferably, wherein the V_H comprises the HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 1, the HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 5, and the HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 10; and the V_L comprises the LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 16, the LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and the LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 20;

preferably, wherein the V_H comprises the HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 3, the HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 7, and the HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 10; and the V_L comprises the LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 15, the LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and the LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 20;

preferably, wherein the V_H comprises the HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 1, the HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 5, and the HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 10; and the V_L comprises the LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 16, the LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and the LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 20;

preferably, wherein the V_H comprises the HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 4, the HC-CDR2 comprising the amino acid sequence

of SEQ ID NO: 8, and the HC-CDR3 comprising the amino acid sequence of
 SEQ ID NO: 11; and the V_L comprises the LC-CDR1 comprising the amino acid
 sequence of SEQ ID NO: 17, the LC-CDR2 comprising the amino acid sequence
 of SEQ ID NO: 19, and the LC-CDR3 comprising the amino acid sequence of
 5 SEQ ID NO: 21;

preferably, wherein the V_H comprises the HC-CDR1 comprising the amino acid
 sequence of SEQ ID NO: 1, the HC-CDR2 comprising the amino acid sequence
 of SEQ ID NO: 5, and the HC-CDR3 comprising the amino acid sequence of
 SEQ ID NO: 9; and the V_L comprises the LC-CDR1 comprising the amino acid
 10 sequence of SEQ ID NO: 85, the LC-CDR2 comprising the amino acid sequence
 of SEQ ID NO: 18, and the LC-CDR3 comprising the amino acid sequence of
 SEQ ID NO: 20;

preferably, wherein the V_H comprises the HC-CDR1 comprising the amino acid
 sequence of SEQ ID NO: 1, the HC-CDR2 comprising the amino acid sequence
 15 of SEQ ID NO: 5, and the HC-CDR3 comprising the amino acid sequence of
 SEQ ID NO: 9; and the V_L comprises the LC-CDR1 comprising the amino acid
 sequence of SEQ ID NO: 86, the LC-CDR2 comprising the amino acid sequence
 of SEQ ID NO: 18, and the LC-CDR3 comprising the amino acid sequence of
 SEQ ID NO: 20; or

20 preferably, wherein the antibody moiety comprises a heavy chain variable
 region (V_H) and a light chain variable region (V_L) comprising:

a) a HC-CDR1, a HC-CDR2, and a HC-CDR3, respectively comprising the
 amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_H having
 the sequence set forth in SEQ ID NO: 22, and a LC-CDR1, a LC-CDR2, and a
 25 LC-CDR3, respectively comprising the amino acid sequences of a CDR1, a

CDR2, and a CDR3 within the V_L having the sequence set forth in SEQ ID NO: 23;

5 b) a HC-CDR1, a HC-CDR2, and a HC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_H having the sequence set forth in SEQ ID NO: 24, and a LC-CDR1, a LC-CDR2, and a LC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_L having the sequence set forth in SEQ ID NO: 25;

10 c) a HC-CDR1, a HC-CDR2, and a HC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_H having the sequence set forth in SEQ ID NO: 26, and a LC-CDR1, a LC-CDR2, and a LC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_L having the sequence set forth in SEQ ID NO: 27;

15 d) a HC-CDR1, a HC-CDR2, and a HC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_H having the sequence set forth in SEQ ID NO: 28, and a LC-CDR1, a LC-CDR2, and a LC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_L having the sequence set forth in SEQ ID NO: 29;

20 e) a HC-CDR1, a HC-CDR2, and a HC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_H having the sequence set forth in SEQ ID NO: 30, and a LC-CDR1, a LC-CDR2, and a LC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_L having the sequence set forth in SEQ ID NO: 31;

f) a HC-CDR1, a HC-CDR2, and a HC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_H having the sequence set forth in SEQ ID NO: 32, and a LC-CDR1, a LC-CDR2, and a LC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_L having the sequence set forth in SEQ ID NO: 33;

g) a HC-CDR1, a HC-CDR2, and a HC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_H having the sequence set forth in SEQ ID NO: 34, and a LC-CDR1, a LC-CDR2, and a LC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_L having the sequence set forth in SEQ ID NO: 35;

h) a HC-CDR1, a HC-CDR2, and a HC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_H having the sequence set forth in SEQ ID NO: 36, and a LC-CDR1, a LC-CDR2, and a LC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_L having the sequence set forth in SEQ ID NO: 37;

i) a HC-CDR1, a HC-CDR2, and a HC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_H having the sequence set forth in SEQ ID NO: 38, and a LC-CDR1, a LC-CDR2, and a LC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_L having the sequence set forth in SEQ ID NO: 39;

j) a HC-CDR1, a HC-CDR2, and a HC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_H having the sequence set forth in SEQ ID NO: 40, and a LC-CDR1, a LC-CDR2, and a

LC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_L having the sequence set forth in SEQ ID NO: 41;

5 k) a HC-CDR1, a HC-CDR2, and a HC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_H having the sequence set forth in SEQ ID NO: 87, and a LC-CDR1, a LC-CDR2, and a LC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_L having the sequence set forth in SEQ ID NO: 88;

10 l) a HC-CDR1, a HC-CDR2, and a HC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_H having the sequence set forth in SEQ ID NO: 87, and a LC-CDR1, a LC-CDR2, and a LC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_L having the sequence set forth in SEQ ID NO: 89; or

15 m) a HC-CDR1, a HC-CDR2, and a HC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_H having the sequence set forth in SEQ ID NO: 87, and a LC-CDR1, a LC-CDR2, and a LC-CDR3, respectively comprising the amino acid sequences of a CDR1, a CDR2, and a CDR3 within the V_L having the sequence set forth in SEQ ID NO: 90.

3. The anti-Sclerostin construct of claim 1 or claim 2, wherein the V_H comprises an amino acid sequence of any one of SEQ ID NOs: 22, 24, 26, 28, 25 30, 32, 34, 36, 38, 40, and 87, or a variant comprising an amino acid sequence having at least about 80% sequence identity; and/or wherein the V_L comprises an amino acid sequence of any one of SEQ ID NOs: 23, 25, 27, 29, 31, 33, 35,

37, 39, 41, and 88-90 or a variant comprising an amino acid sequence having at least about 80% sequence identity;

preferably, wherein:

- 5 a) the V_H comprises an amino acid sequence of SEQ ID NO: 22, or a variant comprising an amino acid sequence having at least about 80% sequence identity; and the V_L comprises an amino acid sequence of SEQ ID NO: 23, or a variant comprising an amino acid sequence having at least about 80% sequence identity,
- 10 b) the V_H comprises an amino acid sequence of SEQ ID NO: 24, or a variant comprising an amino acid sequence having at least about 80% sequence identity; and the V_L comprises an amino acid sequence of SEQ ID NO: 25, or a variant comprising an amino acid sequence having at least about 80% sequence identity,
- 15 c) the V_H comprises an amino acid sequence of SEQ ID NO: 26, or a variant comprising an amino acid sequence having at least about 80% sequence identity; and the V_L comprises an amino acid sequence of SEQ ID NO: 27, or a variant comprising an amino acid sequence having at least about 80% sequence identity,
- 20 d) the V_H comprises an amino acid sequence of SEQ ID NO: 28, or a variant comprising an amino acid sequence having at least about 80% sequence identity; and the V_L comprises an amino acid sequence of SEQ ID NO: 29, or a variant comprising an amino acid sequence having at least about 80% sequence identity,
- 25 e) the V_H comprises an amino acid sequence of SEQ ID NO: 30, or a variant comprising an amino acid sequence having at least about 80% sequence identity; and the V_L comprises an amino acid sequence of SEQ ID NO: 31, or a variant comprising an amino acid sequence having at least about 80% sequence identity,

f) the V_H comprises an amino acid sequence of SEQ ID NO: 32, or a variant comprising an amino acid sequence having at least about 80% sequence identity; and the V_L comprises an amino acid sequence of SEQ ID NO: 33, or a variant comprising an amino acid sequence having at least about 80% sequence identity,

5 g) the V_H comprises an amino acid sequence of SEQ ID NO: 34, or a variant comprising an amino acid sequence having at least about 80% sequence identity; and the V_L comprises an amino acid sequence of SEQ ID NO: 35, or a variant comprising an amino acid sequence having at least about 80% sequence identity,

10 h) the V_H comprises an amino acid sequence of SEQ ID NO: 36, or a variant comprising an amino acid sequence having at least about 80% sequence identity; and the V_L comprises an amino acid sequence of SEQ ID NO: 37, or a variant comprising an amino acid sequence having at least about 80% sequence identity,

15 i) the V_H comprises an amino acid sequence of SEQ ID NO: 38, or a variant comprising an amino acid sequence having at least about 80% sequence identity; and the V_L comprises an amino acid sequence of SEQ ID NO: 39, or a variant comprising an amino acid sequence having at least about 80% sequence identity,

j) the V_H comprises an amino acid sequence of SEQ ID NO: 40, or a variant
20 comprising an amino acid sequence having at least about 80% sequence identity; and the V_L comprises an amino acid sequence of SEQ ID NO: 41, or a variant comprising an amino acid sequence having at least about 80% sequence identity,

k) the V_H comprises an amino acid sequence of SEQ ID NO: 87, or a variant comprising an amino acid sequence having at least about 80% sequence
25 identity; and the V_L comprises an amino acid sequence of SEQ ID NO: 88, or a variant comprising an amino acid sequence having at least about 80% sequence identity,

l) the V_H comprises an amino acid sequence of SEQ ID NO: 87, or a variant comprising an amino acid sequence having at least about 80% sequence identity; and the V_L comprises an amino acid sequence of SEQ ID NO: 89, or a variant comprising an amino acid sequence having at least about 80% sequence identity,

5 or

m) the V_H comprises an amino acid sequence of SEQ ID NO: 87, or a variant comprising an amino acid sequence having at least about 80% sequence identity; and the V_L comprises an amino acid sequence of SEQ ID NO: 90, or a variant comprising an amino acid sequence having at least about 80% sequence
10 identity.

4. The anti-Sclerostin construct of any one of claims 1-3, wherein the antibody moiety is a humanized antibody moiety derived from an anti-Sclerostin antibody comprising a heavy chain variable region (V_H) and a second light chain variable
15 region (V_L), wherein:

a) the V_H comprises a HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 1, a HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 5, and a HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 9, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in
20 the HC-CDRs; and the V_L comprises a LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 15, a LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and a LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 20, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in the LC-CDRs;

25 b) the V_H comprises a HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 1, a HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 6, and a HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 10,

or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in the HC-CDRs; and the V_L comprises a LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 15, a LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and a LC-CDR3 comprising the amino acid sequence of

5 SEQ ID NO: 20, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in the LC-CDRs;

c) the V_H comprises a HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 2, a HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 7, and a HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 10,

10 or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in the HC-CDRs; and the V_L comprises a LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 15, a LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and a LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 20, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid
15 substitutions in the LC-CDRs;

d) the V_H comprises a HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 3, a HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 6, and a HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 10, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in
20 the HC-CDRs; and the V_L comprises a LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 15, a LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and a LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 20, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in the LC-CDRs;

25 e) the V_H comprises a HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 199, a HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 5, and a HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 10,

or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in the HC-CDRs; and the V_L comprises a LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 16, a LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and a LC-CDR3 comprising the amino acid sequence of

5 SEQ ID NO: 20, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in the LC-CDRs;

f) the V_H comprises a HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 3, a HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 200, and a HC-CDR3 comprising the amino acid sequence of SEQ ID NO:

10 10, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in the HC-CDRs; and the V_L comprises a LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 15, a LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and a LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 20, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid
15 substitutions in the LC-CDRs;

g) the V_H comprises a HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 199, a HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 5, and a HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 10, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in
20 the HC-CDRs; and the V_L comprises a LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 16, a LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 18, and a LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 20, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in the LC-CDRs; or

25 h) the V_H comprises a HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 4, a HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 8, and a HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 11, or a

variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in the HC-CDRs; and the V_L comprises a LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 17, a LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 19, and a LC-CDR3 comprising the amino acid sequence of

5 SEQ ID NO: 21, or a variant thereof comprising up to 5, 4, 3, 2, or 1 amino acid substitutions in the LC-CDRs.

5. The anti-Sclerostin construct of any one of claims 1-4, wherein the antibody moiety is an antibody or antigen-binding fragment thereof selected from the group consisting of a full-length antibody, a bispecific antibody, a single-chain Fv (scFv) fragment, a Fab fragment, a Fab' fragment, a F(ab')₂, an Fv fragment, 10 a disulfide stabilized Fv fragment (dsFv), a disulfide stabilized scFv (dsscFv), a (dsFv)₂, a Fv-Fc fusion, a scFv-Fc fusion, a scFv-Fv fusion, a diabody, a tribody, and a tetrabody;

preferably, wherein the construct is a full-length antibody comprising an Fc 15 fragment;

preferably, wherein the antibody moiety is a scFv fragment; or

preferably, wherein the Sclerostin is a human Sclerostin.

6. The anti-Sclerostin construct of any one of claims 1-5, wherein the anti-Sclerostin construct further comprises a second moiety;

20 preferably, wherein the second moiety comprises a second antibody moiety that specifically recognizes an antigen; or

preferably, wherein the second antibody moiety comprises a second heavy chain variable region (V_{H-2}) and a light chain variable region (V_{L-2}).

7. The anti-Sclerostin construct of claim 6, wherein the antigen is DKK1;

preferably, wherein the DKK1 is a human DKK1;

preferably, wherein the second antibody moiety competes for a binding epitope of DKK1 with a third antibody moiety comprising a third heavy chain variable

5 region (V_{H-3}) and a third light chain variable region (V_{L-3}), wherein:

a) the V_{H-3} comprising a HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 42, a HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 43, and a HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 44, and the V_{L-3} comprises a LC-CDR1 comprising the amino acid
10 sequence of SEQ ID NO: 45, a LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 46, and a LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 47;

b) the V_{H-3} comprises a HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 48, a HC-CDR2 comprising the amino acid sequence
15 of SEQ ID NO: 49, and a HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 50, and the V_{L-3} comprises a LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 51, a LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 52, and a LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 58; or

20 c) the V_{H-3} comprises a HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 54, a HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 55, and a HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 56, and the V_{L-3} comprises a LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 57, a LC-CDR2 comprising the amino acid sequence of SEQ ID
25 NO: 58, and a LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 59;

preferably, wherein the V_{H-2} comprises the HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 42, the HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 43, and the HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 44, and the V_{L-2} comprises the LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 45, the LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 46, and the LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 47;

preferably, wherein the V_{H-2} comprises the HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 48, the HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 49, and the HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 50, and the V_{L-2} comprises the LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 51, the LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 52, and the LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 58;

preferably, wherein the V_{H-2} comprising the HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 54, the HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 55, and the HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 56, and the V_{L-2} comprises the LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 57, the LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 58, and the LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 59.

8. The anti-Sclerostin construct of claim 6, wherein the antigen is RANKL;

preferably, wherein the antigen is human RANKL;

preferably, wherein the second antibody moiety competes for a binding epitope of RANKL with a third antibody moiety comprising a third heavy chain variable

- region (V_{H-3}) and a third light chain variable region (V_{L-3}), wherein the V_{H-3} comprising a HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 66, a HC-CDR2 comprising the amino acid sequence of SEQ ID NO: 67, and a HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 68, and the V_{L-3}
- 5 comprises a LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 69, a LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 70, and a LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 71; or preferably, wherein the V_{H-2} comprises the HC-CDR1 comprising the amino acid sequence of SEQ ID NO: 66, the HC-CDR2 comprising the amino acid
- 10 sequence of SEQ ID NO: 67, and the HC-CDR3 comprising the amino acid sequence of SEQ ID NO: 68, and the V_{L-2} comprises the LC-CDR1 comprising the amino acid sequence of SEQ ID NO: 69, the LC-CDR2 comprising the amino acid sequence of SEQ ID NO: 70, and the LC-CDR3 comprising the amino acid sequence of SEQ ID NO: 71.
- 15 9. The anti-Sclerostin construct of any one of claims 6-8, wherein the second antibody moiety is a full-length antibody, a Fab, a Fab', a (Fab')₂, an Fv, a single chain Fv (scFv) fragment, an scFv-scFv, a minibody, a diabody, or an sdAb;
- preferably, wherein the second antibody moiety is a full-length antibody
- 20 comprising two heavy chains, two light chains and a Fc fragment, and wherein the anti-Sclerostin antibody moiety is a single chain Fv (scFv) fragment comprising the V_H fused with the V_L ;
- preferably, wherein the anti-Sclerostin antibody moiety is fused to one or both of the heavy chains of the full-length antibody;
- 25 preferably, wherein the anti-Sclerostin antibody moiety is fused to one or both of the light chains of the full-length antibody;

preferably, wherein the anti-Sclerostin antibody moiety is fused to N-terminus of the one or both of the heavy chains or light chains of the full-length antibody;

preferably, wherein the anti-Sclerostin antibody moiety is fused to C-terminus of the one or both of the heavy chains or light chains of the full-length antibody;

- 5 preferably, wherein the anti-Sclerostin antibody moiety is fused to the full-length antibody *via* a first linker;

preferably, wherein the anti-Sclerostin antibody moiety is fused to the full-length antibody without a linker;

- preferably, wherein the first linker is a GS linker selected from the group
10 consisting of SEQ ID NOs: 74-84;

preferably, wherein the V_H is fused with the V_L *via* a second linker;

preferably, wherein the scFv fragment comprises, from N-terminus to C-terminus, the V_H , the second linker, and the V_L ;

- preferably, wherein the scFv fragment comprises, from N-terminus to
15 C-terminus, the V_L , the second linker, and the V_H , and optionally a C-terminal alanine residue; or

preferably, wherein the second linker comprises an amino acid sequence of SEQ ID NO: 76 or 77.

10. The anti-Sclerostin construct of any one of claims 6-8, wherein the second
20 antibody moiety is a scFv fragment comprising the V_{H-2} and the V_{L-2} , and wherein the anti-Sclerostin antibody moiety is a full-length antibody comprising two heavy chains, two light chains and a Fc fragment;

preferably, wherein the second antibody moiety is fused to both of the heavy chains of the full-length antibody;

preferably, wherein the second antibody moiety is fused to both of the light chains of the full-length antibody;

- 5 preferably, wherein the second antibody moiety is fused to N-terminus of the both of the heavy chains or light chains of the full-length antibody;

preferably, wherein the second antibody moiety is fused to C-terminus of the both of the heavy chains or light chains of the full-length antibody;

- 10 preferably, wherein the second antibody moiety is fused to the full-length antibody *via* a first linker;

preferably, wherein the second antibody moiety is fused to the full-length antibody without a linker;

preferably, wherein the first linker is a GS first linker selected from the group consisting of SEQ ID NOs: 74-84;

- 15 preferably, wherein the V_{H-2} is fused with the V_{L-2} *via* a second linker;

preferably, wherein the V_{H-2} is fused with the V_{L-2} without a linker;

preferably, wherein the scFv fragment comprises, from N-terminus to C-terminus, the V_{H-2} , the second linker, and the V_{L-2} ;

- 20 preferably, wherein the scFv fragment comprises, from N-terminus to C-terminus, the V_{L-2} , the second linker, and the V_{H-2} , and optionally a C-terminal alanine residue; or

preferably, wherein the second linker comprises an amino acid sequence of SEQ ID NO: 76 or 77.

11. The anti-Sclerostin construct of claim 9 or claim 10, wherein the scFv is a disulfide stabilized scFv (“dsscFv”);

5 preferably, wherein the dsscFv comprises a) a G44C mutation in the V_H or V_{H-2} according to the numbering of SEQ ID NO: 60, and b) a G100C mutation in the V_L or V_{L-2} according to the numbering of SEQ ID NO: 61.

12. The anti-Sclerostin construct of any one of claims 9-11, wherein the construct comprises:

- 10 1) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 91, and two light chains each comprising the amino acid sequence of SEQ ID NO: 93;
- 2) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 92, and two
- 15 light chains each comprising the amino acid sequence of SEQ ID NO: 93;
- 3) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 94, and two light chains each comprising the amino acid sequence of SEQ ID NO: 96;
- 4) two heavy chains fused with the anti-Sclerostin or second antibody
- 20 moiety each comprising the amino acid sequence of SEQ ID NO: 95, and two light chains each comprising the amino acid sequence of SEQ ID NO: 96;
- 5) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 97, and two light chains each comprising the amino acid sequence of SEQ ID NO: 99;

6) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 98, and two light chains each comprising the amino acid sequence of SEQ ID NO: 99;

7) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 100, and two light chains each comprising the amino acid sequence of SEQ ID NO: 102;

8) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 101, and two light chains each comprising the amino acid sequence of SEQ ID NO: 102;

9) two heavy chains each comprising the amino acid sequence of SEQ ID NO: 103, and two light chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 104;

10) two heavy chains each comprising the amino acid sequence of SEQ ID NO: 103, and two light chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 105;

11) two heavy chains each comprising the amino acid sequence of SEQ ID NO: 106, and two light chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 107;

12) two heavy chains each comprising the amino acid sequence of SEQ ID NO: 106, and two light chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 108;

13) two heavy chains each comprising the amino acid sequence of SEQ ID NO: 109, and two light chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 110;

14) two heavy chains each comprising the amino acid sequence of SEQ ID NO: 109, and two light chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 111;

15) two heavy chains each comprising the amino acid sequence of SEQ ID NO: 112, and two light chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 113;

5 16) two heavy chains each comprising the amino acid sequence of SEQ ID NO: 112, and two light chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 114;

17) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 115, and two light chains each comprising the amino acid sequence of SEQ ID NO: 119;

10 18) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 116, and two light chains each comprising the amino acid sequence of SEQ ID NO: 119;

15 19) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 117, and two light chains each comprising the amino acid sequence of SEQ ID NO: 119;

20) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 118, and two light chains each comprising the amino acid sequence of SEQ ID NO: 119;

20 21) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 120, and two light chains each comprising the amino acid sequence of SEQ ID NO: 122;

22) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 121, and two light chains each comprising the amino acid sequence of SEQ ID NO: 122;

25 23) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 123, and two light chains each comprising the amino acid sequence of SEQ ID NO: 125;

24) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 124, and two light chains each comprising the amino acid sequence of SEQ ID NO: 125;

5 25) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 126, and two light chains each comprising the amino acid sequence of SEQ ID NO: 129;

26) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 127, and two light chains each comprising the amino acid sequence of SEQ ID NO: 129;

10 27) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 128, and two light chains each comprising the amino acid sequence of SEQ ID NO: 129;

28) two heavy chains each comprising the amino acid sequence of SEQ ID NO: 133, and two light chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 130;

29) two heavy chains each comprising the amino acid sequence of SEQ ID NO: 133, and two light chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 131;

20 30) two heavy chains each comprising the amino acid sequence of SEQ ID NO: 133, and two light chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 132;

31) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 177, and two light chains each comprising the amino acid sequence of SEQ ID NO: 125;

25 32) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 178, and two light chains each comprising the amino acid sequence of SEQ ID NO: 125;

33) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 178, and two light chains each comprising the amino acid sequence of SEQ ID NO: 122;

34) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 179, and two light chains each comprising the amino acid sequence of SEQ ID NO: 122; or

35) two heavy chains fused with the anti-Sclerostin or second antibody moiety each comprising the amino acid sequence of SEQ ID NO: 180, and two light chains each comprising the amino acid sequence of SEQ ID NO: 122.

10

13. The anti-Sclerostin construct of any one of claims 6-8, wherein the construct comprises:

a) a first polypeptide comprising a first light chain comprising, from N-terminus to C-terminus, i) the V_L , ii) a first light chain constant domain (“first CL domain”);

b) a second polypeptide comprising a first heavy chain comprising, from N-terminus to C-terminus, i) the V_H , ii) a first heavy chain constant domain (“first CH1 domain”), and iii) a first Fc domain;

c) a third polypeptide comprising a second heavy chain comprising, from N-terminus to C-terminus, i) the V_{H-2} , ii) a second heavy chain constant domain (“second CH1 domain”), and iii) a second Fc domain; and

d) a fourth polypeptide comprising a second light chain comprising, from N-terminus to C-terminus, i) the V_{L-2} , ii) a second light chain constant domain (“second CL domain”),

wherein the first and the second Fc domains form an Fc fragment; preferably, wherein one of the first and the second Fc domains comprises a T366W mutation, and optionally a S354C mutation, and wherein the other Fc

25

domain comprises a T366S mutation, a L368A mutation, a Y407V mutation, and optionally a Y349C mutation, wherein numbering is according to the EU index;

- 5 preferably, wherein either i) the first CH1 domain and the first CL domain or ii) the second CH1 domain and the second CL domain is selected from the group consisting of:

a) a CH1 domain wherein the amino acid at position 141 is substituted for cysteine and the cysteine at position 131 or 220 is substituted for a
10 non-cysteine amino acid; and a CL domain wherein the amino acid at position 116 is substituted for cysteine and the cysteine at position 214 is substituted for a non-cysteine amino acid;

b) a CH1 domain wherein the amino acid at position 168 is substituted for cysteine and the cysteine at position 131 or 220 is substituted for a
15 non-cysteine amino acid; and a CL domain wherein the amino acid at position 164 is substituted for cysteine and the cysteine at position 214 is substituted for a non-cysteine amino acid;

c) a CH1 domain wherein the amino acid at position 126 is substituted for cysteine and the cysteine at position 131 or 220 is substituted for a
20 non-cysteine amino acid; and a CL domain wherein the amino acid at position 121 is substituted for cysteine and the cysteine at position 214 is substituted for a non-cysteine amino acid;

d) a CH1 domain wherein the amino acid at position 128 is substituted for cysteine and the cysteine at position 131 or 220 is substituted for a
25 non-cysteine amino acid; and a CL domain wherein the amino acid at position 118 is substituted for cysteine and the cysteine at position 214 is substituted for a non-cysteine amino acid;

e) a CH1 domain wherein the amino acid at position 170 is substituted for cysteine and the cysteine at position 131 or 220 is substituted for a non-cysteine amino acid; and a CL domain wherein the amino acid at position 176 is substituted for cysteine and the cysteine at position 214 is substituted for
5 a non-cysteine amino acid;

f) a CH1 domain wherein the amino acid at position 171 is substituted for cysteine and the cysteine at position 131 or 220 is substituted for a non-cysteine amino acid; and a CL domain wherein the amino acid at position 162 is substituted for cysteine and the cysteine at position 214 is substituted for
10 a non-cysteine amino acid;

g) a CH1 domain wherein the amino acid at position 173 is substituted for cysteine and the cysteine at position 131 or 220 is substituted for a non-cysteine amino acid; and a CL domain wherein the amino acid at position 160 is substituted for cysteine and the cysteine at position 214 is substituted for
15 a non-cysteine amino acid;

wherein numbering is according to the EU index;
preferably, the anti-Sclerostin construct comprises:

1) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 135, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 134, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 136, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 137;
20

2) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 135, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 134, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 138, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 139;
25

3) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 135, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 134, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 140, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 141;

4) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 135, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 134, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 142, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 143;

5) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 135, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 134, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 144, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 145;

6) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 147, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 146, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 148, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 149;

7) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 147, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 146, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 150, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 151;

8) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 147, the second polypeptide comprises the amino acid sequence of SEQ ID

NO: 146, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 152, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 153;

9) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 147, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 146, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 154, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 155;

10) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 147, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 146, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 156, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 157;

11) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 147, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 146, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 158, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 159;

12) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 147, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 146, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 160, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 161;

13) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 147, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 146, the third polypeptide comprises the amino acid sequence of SEQ ID

NO: 162, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 163;

14) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 147, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 171, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 172, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 163;

15) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 147, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 173, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 174, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 163;

16) the first polypeptide comprises the amino acid sequence of SEQ ID NO: 147, the second polypeptide comprises the amino acid sequence of SEQ ID NO: 175, the third polypeptide comprises the amino acid sequence of SEQ ID NO: 176, and the fourth polypeptide comprises the amino acid sequence of SEQ ID NO: 163.

14. The anti-Sclerostin construct of claim 6, wherein the second moiety comprises a half-life extending moiety;

preferably, wherein the half-life extending moiety is an Fc fragment.

15. The anti-Sclerostin construct of any one of claims 5, and 9-13, wherein the Fc fragment is selected from the group consisting of Fc fragments from IgG, IgA, IgD, IgE, IgM, and combinations and hybrids thereof;

preferably, wherein the Fc fragment is selected from the group consisting of Fc fragments from IgG1, IgG2, IgG3, IgG4, and combinations and hybrids thereof;

preferably, wherein the Fc fragment comprises a H435R mutation and an Y436F mutation;

- 5 preferably, wherein the Fc fragment has a reduced effector function as compared to the corresponding wildtype Fc fragment; or

preferably, wherein the Fc fragment has:

- a) an enhanced effector function as compared to the corresponding wildtype Fc fragment, and/or
- 10 b) an enhanced FcRn binding affinity as compared to the corresponding wildtype Fc fragment.

16. The anti-Sclerostin construct of claim 6, wherein the construct is an antibody-drug conjugate or antibody fusion protein;

- preferably, wherein the second moiety comprises an agent or agents selected
- 15 from the group consisting of a parathyroid hormone (PTH), a selective estrogen receptor modulator (SERM), a bisphosphonate, a prostaglandin E (PGE) receptor agonist, VEGF, TGF β , growth factor (myostatin), calcitonin, and combinations thereof.

- 20 17. An anti-Sclerostin construct that specifically binds to Sclerostin competitively with the anti-Sclerostin construct of any one of claims 1-16.

18. A pharmaceutical composition comprising the anti-Sclerostin construct of any one of claims 1-17 and a pharmaceutically acceptable carrier;

preferably, wherein the composition further comprises an agent or agents selected from the group consisting of a parathyroid hormone (PTH), a selective estrogen receptor modulator (SERM), VEGF, and TGF β , growth factor (myostatin), calcitonin, and combinations thereof.

- 5 19. An isolated nucleic acid encoding the anti-Sclerostin construct of any one of claims 1-17.
20. A vector comprising the isolated nucleic acid of claim 19.
21. An isolated host cell comprising the isolated nucleic acid of claim 19, or the vector of claim 20.
- 10 22. A method of producing an anti-Sclerostin construct comprising:
 - a) culturing the isolated host cell of claim 21 under conditions effective to express the anti-Sclerostin construct or a portion thereof; and
 - b) obtaining the expressed anti-Sclerostin construct or a portion thereof from the host cell.
- 15 23. Use of the anti-Sclerostin construct of any one of claims 1-17, and/or the pharmaceutical composition of claim 18 characterized by being in the manufacture of a medicament for treating and/or preventing a disease or condition in an individual, wherein the medicament is administered an effective mount to the individual;
- 20 preferably, wherein the disease or condition is a bone-related disorder or cartilage related disorder, a bone marrow or haematological disorder, a musculoskeletal rare disease, a muscle-related disorder, or a cancer;

- preferably, wherein the bone-related disorder is osteogenesis imperfecta, osteoporosis or osteopenia (in men and women), osteonecrosis, delay bone healing, non-union bone fractures, multiple myeloma, multiple myeloma related bone disorders, primary bone tumor, bone metastasis of malignancies,
- 5 inflammatory or infectious bone disease, osteomalacia, hypercalcemia, Paget's disease, immobilization-induced bone loss, glucocorticoid-induced bone loss, inflammation-induced bone loss including arthritis-induced bone loss, spaceflight osteoporosis/osteopenia and bone loss caused by reduced gravity or other disease or condition associated with a) bone loss of either quantity or
- 10 quality or both and/or b) abnormality of bone structure and quality;
- preferably, wherein the bone-related disorder is osteoporosis or osteopenia;
- preferably, wherein the bone-related disorder is osteogenesis imperfecta;
- preferably, wherein the bone-related disorder is multiple myeloma and multiple myeloma related bone disorders;
- 15 preferably, wherein the cartilage disorder is chondromatosis, chondrodysplasia, achondroplasia, epiphyseal dysplasia, chondrodystrophic myotonia, juxtacortical chondroma, tear of cartilage of knee, osteofibrous dysplasia, osteoarthritis, osteogenesis imperfecta, hypophosphatemic rickets or osteochondrodystrophy;
- preferably, wherein the muscle-related disorder is sarcopenia and cancer
- 20 sarcopenia.

24. Use of the anti-Sclerostin construct of any one of claims 1-17, and/or the pharmaceutical composition of claim 18 characterized by being in the manufacture of a medicament for facilitating heal after bone or joint surgeries in

an individual, wherein the medicament is administered an effective amount to the individual.

25. The use of claim 23 or claim 24, wherein the anti-Sclerostin construct is administered by subcutaneous injection, intravenous injection, intramuscular
5 injection or administered orally or parenterally into the individual.

26. The use of any one of claims 23-25, wherein the method further comprises administering a second agent or therapy;

preferably, wherein the second agent or therapy comprises an anti-DKK1 antibody;

10 preferably, wherein the second agent or therapy comprises an anti-RANKL antibody;

preferably, wherein the second agent or therapy comprises an agent selected from the group consisting of a parathyroid hormone (PTH), a selective estrogen receptor modulator (SERM), a bisphosphonate, a prostaglandin E (PGE)
15 receptor agonist, VEGF, TGF β , growth factor (myostatin) and calcitonin.

27. The use of any one of claims 23-26, wherein the individual is a human.