CLAIMS

What is claimed is:

1. An antibody or antigen-binding fragment thereof, comprising a first human CH1 fragment comprising a L11W substitution, a first human Cκ fragment comprising a V26W substitution, a second human CH1 fragment that does not include the L11W substitution, and a second human Cκ fragment that does not include the V26W substitution.

2. The antibody or antigen-binding fragment thereof of claim 1, wherein the first CH1 fragment comprises substitutions L11W and K101E and the first Cκ fragment comprises substitutions V26W and D15K/H.

3. The antibody or antigen-binding fragment thereof of claim 1, wherein the first CH1 fragment comprises substitutions L11W and K96D and the first Cκ fragment comprises substitutions V26W and E16R.

4. The antibody or antigen-binding fragment thereof of claim 1, wherein the first CH1 fragment comprises substitutions L11W and K96E and the first Cκ fragment comprises substitutions V26W and E16K.

5. The antibody or antigen-binding fragment thereof of claim 1, wherein the first CH1 fragment comprises substitutions L11W and K96E and the first Cκ fragment comprises substitutions V26W and E16R.

6. The antibody or antigen-binding fragment thereof of any one of claims 1-5, wherein the second human CH1 and the second human Cκ fragments are wild-type.

7. The antibody or antigen-binding fragment thereof of any one of claims 1-6, further comprising a heavy chain variable region, a light chain variable region, an Fc region, or the combination thereof.

8. The antibody or antigen-binding fragment thereof of claim 7, which is of class IgG.

9. The antibody or antigen-binding fragment thereof of claim 8, wherein the isotype is IgG1, IgG2, IgG3 or IgG4.

10. A bispecific antibody comprising a first CH1/Cκ pair and a second CH1/Cκ pair, wherein the CH1 and Cκ fragments of the first pair comprise amino acid substitutions L11W in CH1 and V26W in Cκ, and the CH1 and Cκ fragments of the second pair do not include the L11W and V26W substitutions.

11. The bispecific antibody of claim 10, wherein the CH1 and Cκ fragments of the first pair further comprise substitutions selected from the group consisting of (a) K101E in CH1 and D15K/H in Cκ, (b) K96D in CH1 and E16R in Cκ, and (c) K96E in CH1 and E16K in Cκ, and the CH1 and Cκ fragments of the second pair do not include the substitutions of (a)-(c).

12. A composition comprising the antibody or antigen-binding fragment thereof of any one of claims 1-11 and a pharmaceutically acceptable carrier.

13. An isolated cell comprising one or more polynucleotide encoding the antibody or antigen-binding fragment thereof of any one of claims 1-11.