WHAT IS CLAIMED:

1. A recombinant antigen-binding protein that binds a human IgG1-Fc domain, a human IgG2-Fc domain, or a human IgG4-Fc domain consisting of a CH3 domain comprising a histidine at IMGT position 95 and a tyrosine at IMGT position 96, and does not bind to a human IgG1-Fc domain, a human IgG2-Fc domain, or a human IgG4-Fc domain consisting of a CH3 domain comprising an arginine at IMGT position 95 and a phenylalanine at IMGT position 96, wherein the recombinant antigen-binding protein further comprises:

an antibody or ScFv that binds to the same epitope on the Fc domain as an antibody or ScFv which comprises a heavy chain CDR-1 (HCDR1) having the amino acid sequence of SEQ ID NO:27, an HCDR-2 having the amino acid sequence of SEQ ID NO:28, an HCDR-3 having the amino acid sequence of SEQ ID NO:29, a light chain variable region having the amino acid sequence of SEQ ID NO: 16.

2. The recombinant antigen-binding protein of claim 1, wherein:

a. the antigen-binding protein comprises one or more complementarity determining regions (CDRs) of a heavy chain variable region (HCVR) having an amino acid sequence of SEQ ID NO:15, or of a light chain variable region (LCVR) having an amino acid sequence of SEQ ID NO:16; or

b. the antigen-binding protein comprises an HCVR having the amino acid sequence of SEQ ID NO:15 and an LCVR having the amino acid sequence of SEQ ID NO:16.

3. The recombinant antigen-binding protein of claim 1 or claim 2, wherein the antigen-binding protein is an ScFv fusion protein comprising:

a. (i) a heavy chain variable domain comprising an amino acid sequence of SEQ ID NO:15, (ii) a light chain variable domain comprising an amino acid sequence of SEQ ID NO:16; and (iii) a membrane anchor domain comprising an amino acid sequence of SEQ ID NO:17 or SEQ ID NO:21; or

b. the amino acid sequence of SEQ ID NO:19.

4. An isolated polynucleotide comprising a nucleic acid sequence that encodes:
   a. the antigen binding protein of any one of claims 1-3; or
   b. a polypeptide comprising the amino acid sequence of SEQ ID NO:19.

5. A nucleic acid vector comprising:
   a. a polynucleotide according to claim 4;
   b. a promoter, which is operably linked to the polynucleotide; and
   c. a polyadenylation sequence.

6. The nucleic acid vector of claim 5 further comprising a nucleic acid encoding:
   a. a selectable marker, or
   b. an energy transfer protein.

7. The nucleic acid vector of claims 5 or 6, wherein:
   a. the promoter is a CMV promoter;
   b. the selectable marker provides neomycin resistance; or
   c. the energy transfer protein is a derivative of green fluorescence protein such as yellow fluorescence protein (“YFP”).

8. The nucleic acid vector of any one of claims 5-7, wherein the vector is circular or linear.

9. The nucleic acid vector of any one of claims 5-8, wherein the vector is integrated into the genome of a host cell and/or the host cell is a CHO cell.

10. A host cell expressing an antigen-binding protein of any one of claims 1-4.

11. The host cell of claim 10, wherein the cell is a CHO cell.

12. A method of detecting or isolating a cell that stably expresses a heterodimeric protein comprising the steps of:

a. expressing in a host cell

a cell surface capture protein (CSCP) comprising an antigen-binding protein of any one of claims 1 to 3, and

a heterodimeric protein, wherein (i) the CSCP binds to a first site on the heterodimeric protein to form a CSCP- heterodimeric protein complex inside the host cell, (ii) the CSCP- heterodimeric protein complex is transported through the host cell, and (iii) then displayed on the surface of the host cell;

b. contacting the host cell with a detection molecule, wherein the detection molecule binds to a second site on the heterodimeric protein; and

c. selecting the host cell which binds the detection molecule,

wherein in the heterodimeric protein:

(i) the first site resides on a heavy chain that has a CH3 domain containing a histidine residue at position 95 according to the IMGT exon numbering system and a tyrosine residue at position 96 according to the IMGT exon numbering system (Fc); and

(ii) the second site resides on a heavy chain that has a CH3 domain containing an arginine residue at position 95 according to the IMGT exon numbering system and a phenylalanine residue at position 96 according to the IMGT exon numbering system (Fc*).

13. The method of claim 12 or 13, comprising the step of contacting the cell with a blocking molecule prior to selecting the host cell at step (c), wherein the blocking molecule binds to CSCP that is not bound to the heterodimeric protein, but does not bind to the CSCP- heterodimeric protein complex.

14. The method of claims 12 or 13, wherein the selecting step (c) is performed by fluorescence activated cell sorting.

15. A method detecting and isolating cells that produce high levels of a heterodimeric protein, comprising:

a. transfecting cells with a nucleic acid that encodes a cell surface capture protein (CSCP) which is an antigen-binding-protein of any one of claims 1 to 3, wherein the CSCP is capable of binding a first site on a subunit of the heterodimeric protein, wherein the cell expresses the heterodimeric protein;

b. detecting a cell of (a) that expresses the CSCP in high yield;

c. isolating and culturing the cell that expresses the CSCP in high yield;

d. detecting the heterodimeric protein on the surface of the isolated and cultured cell of step c. with a detection molecule that binds a second site on a second subunit of the heterodimeric protein; and

e. isolating the cell detected in step (d) that bears the detected heterodimeric protein on its surface,

wherein in the heterodimeric protein:

(i) the first site resides on a heavy chain that has a CH3 domain containing a histidine residue at position 95 according to the IMGT exon numbering system and a tyrosine residue at position 96 according to the IMGT exon numbering system (Fc); and

(ii) the second site resides on a heavy chain that has a CH3 domain containing an arginine residue at position 95 according to the IMGT exon numbering system and a phenylalanine residue at position 96 according to the IMGT exon numbering system (Fc*).

16. The method of claim 15, wherein the selecting step (d) is performed by fluorescence activated cell sorting.

17. The method of any one of claims 12-16, wherein the heterodimeric protein comprises an antibody and the first site on the antibody resides on a heavy chain comprising a wild type CH3 domain.

18. The method of any one of claims 12 to 17, wherein the detection molecule (DM) comprises:

a. an antigen-binding protein comprising a heavy chain variable domain comprising an amino acid sequence of SEQ ID NO:38, or a light chain variable domain comprising an amino acid sequence of SEQ ID NO:39; or

b. an antigen-binding protein comprising a heavy chain comprising an amino acid sequence of SEQ ID NO: 40, and a light chain comprising an amino acid sequence of SEQ ID NO:41.

19. The method of claim any one of claims 12-16, wherein the cell is contacted with a blocking molecule prior to the detection molecule, where the blocking molecule is a non-human IgG or a human Fc molecule.