New AR7
CLAIMS (marked-up)

1. A bispecific IgG antibody comprising two types of heavy chain constant regions CH1, CH1-A and CH1-B, and two types of human kappa light chain constant regions CL, CL-A and CL-B, in which association of the heavy chain and light chain is regulated so that association of CH1-A and CL-B and/or association of CH1-B and CL-A is inhibited,

wherein

~~one set or~~ two or more sets of amino acid residues selected from the group consisting of the sets of amino acid residues shown in (a) to (c) below in the heavy chain and light chain in the bispecific antibody are amino acid residues that mutually repel electrically:

(a) the amino acid residue comprised in the heavy chain constant region (CH1) at position 147 as indicated by EU numbering, and the amino acid residue comprised in the light chain constant region (CL) at position 180 as indicated by EU numbering;

(b) the amino acid residue comprised in CH1 at position 147 as indicated by EU numbering, and the amino acid residue comprised in CL at position 131 as indicated by EU numbering; and,

(c) the amino acid residue comprised in CH1 at position 175 as indicated by EU numbering, and the amino acid residue comprised in CL at position 160 as indicated by EU numbering,

wherein

the amino acid residues that mutually repel electrically are selected from amino acid residues comprised in either set of (X) and (Y) below:

(X) glutamic acid (E) or aspartic acid (D); and

(Y) lysine (K), arginine (R) or histidine (H).

2. The bispecific antibody of claim 1,

A)

further wherein amino acid residues in the set of amino acid residues shown in (d) below are amino acid residues that mutually repel electrically:

(d) the amino acid residue comprised in CH1 at position 213 as indicated by EU numbering, and the amino acid residue comprised in CL at position 123 as indicated by EU numbering; and/or

B)

further wherein two or more amino acid residues forming an interface between the heavy chain variable region and light chain variable region are amino acid residues that mutually repel