

What is claimed is:

1. An antibody specifically binding to human c-Kit comprising a mature heavy variable region comprising CDRs H1, H2 and H3 as defined by Kabat of SEQ ID NOS:14-16 respectively, and a mature light chain variable region comprising CDRs L1, L2 and L3 as defined by Kabat of SEQ ID NOS:36-38 respectively.
2. The antibody of claim 1, wherein the mature heavy chain variable region shows at least 95% sequence identity to SEQ ID NO:13 and the mature light chain variable region shows at least 95% sequence identity to SEQ ID NO:53, wherein any variation from SEQ ID NOS:13 and 53 is outside the CDRs as defined by Kabat.
3. The antibody of claim 2, wherein heavy chain position 1 by Kabat numbering is E.
4. The antibody of claim 2, wherein the following positions of the mature light chain variable region according to Kabat numbering are occupied by amino acids as follows:

Position 9 occupied by L;
Position 12 occupied by P;
Position 14 occupied by T;
Position 15 occupied by P;
Position 18 occupied by P;
Position 20 occupied by S;
Position 22 occupied by S;
Position 37 occupied by L;
Position 43 occupied by S;
Position 45 occupied by Q;
Position 74 occupied by K;
Position 77 occupied by R;
Position 78 occupied by V;
Position 79 occupied by E; and
Position 84 occupied by G.

5. The antibody of claim 1, wherein the mature heavy chain variable region has the amino acid sequence of SEQ ID NO:13 except that position 1 can be E, and the mature light chain variable region has the amino acid sequence of SEQ ID NO:53.
6. The antibody of claim 1, wherein the mature heavy chain variable region is linked to a heavy chain constant region and the mature light chain variable region is linked to a mature light chain constant region.
7. The antibody of claim 6, wherein the heavy chain constant region is human IgG1.
8. A pharmaceutical composition comprising the antibody of claim 1 and a pharmaceutically acceptable carrier.
9. The antibody of claim 1, wherein the mature heavy chain variable region shows at least 98% sequence identity to SEQ ID NO: 13 and the mature light chain variable region shows at least 98% sequence identity to SEQ ID NO:53, wherein any variation from SEQ ID NOS:13 and 53 is outside the CDRs as defined by Kabat.
10. The antibody of claim 1, wherein the mature heavy chain variable region shows at least 99% sequence identity to SEQ ID NO: 13 and the mature light chain variable region shows at least 99% sequence identity to SEQ ID NO:53, wherein any variation from SEQ ID NOS:13 and 53 is outside the CDRs as defined by Kabat.
11. The antibody of claim 5, wherein the mature heavy chain variable region is linked to a heavy chain constant region and the mature light chain variable region is linked to a mature light chain constant region.
12. The antibody of claim 11, wherein the heavy chain constant region is human IgG1.
13. A pharmaceutical composition comprising the antibody of claim 5 and a pharmaceutically acceptable carrier.
14. An antibody specifically binding to human c-Kit comprising a mature heavy chain variable region having the amino acid sequence of SEQ ID NO:13 and a mature light chain variable region having the amino acid sequence of SEQ ID NO:53, wherein the mature heavy chain variable region is linked to a heavy chain constant region of

human IgG1 isotype and the mature light chain variable region is linked to a mature light chain constant region.

15. The antibody of claim 14 expressed from a CHO cell.
16. A pharmaceutical composition comprising the antibody of claim 14 and a pharmaceutically acceptable carrier.