

WHAT IS CLAIMED IS:

1. An anti-CD40 antibody or binding fragment which comprises (i) a V_H chain comprising three CDRs; and (ii) a V_L chain comprising three CDRs, wherein:

V_H CDR#1 is selected from:

GYTFTSYWMH (SEQ ID NO:6),
GYTFTDYYIN (SEQ ID NO:7),
GYSITSNYYWN (SEQ ID NO:8),
GYSISSNYYWN (SEQ ID NO:9),
GYDITSNYYWN (SEQ ID NO:10);

V_H CDR#2 is selected from:

WIFPGSGSVYCNEQFKG (SEQ ID NO:17),
YIRYDGSNNYNPSLKN (SEQ ID NO:18),
NIDPSNGETHYAQKFQG (SEQ ID NO:19),
WIFPGSGSVYSNEQFKG (SEQ ID NO:20),
YIRYDGSNNYNPSLKS (SEQ ID NO:21), and
YIRYDGSNNYNPSLKG (SEQ ID NO:22);

V_H CDR#3 is selected from:

LDY (SEQ ID NO:35),
ERIYYSGSTYDGYFDV (SEQ ID NO:36), and
SLGKFAY (SEQ ID NO:37);

V_L CDR#1 is selected from:

SASSSLSYM (SEQ ID NO:56),
KASQSVVTAVA (SEQ ID NO:57), and
RSSQSLNTNGNTFLN (SEQ ID NO:58);

V_L CDR#2 is selected from:

DTSKLAS (SEQ ID NO:66),
SASNRYT (SEQ ID NO:67), and
RVSNRFS (SEQ ID NO:68);

V_L CDR#3 is selected from:

QQWSSNPWT (SEQ ID NO:86),
QQYSSYPYT (SEQ ID NO:87), and

LQVTHVPFT (SEQ ID NO:88).

2. The anti-CD40 antibody or binding fragment of **claim 1** which comprises CDRs having the sequences of SEQ ID NOS: 8, 18, 35, 58, 68, and 88.
3. The anti-CD40 antibody or binding fragment of **claim 1** which is human or humanized.
4. The anti-CD40 antibody or binding fragment of **claim 1**, which comprises a V_H chain corresponding in sequence to any one of SEQ ID NOS:110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, or 123; and a V_L chain corresponding in sequence to any one of SEQ ID NOS:161, 162, 163, 164, 165, 166, 167, 168, 169, 170, or 171.
5. The anti-CD40 antibody or binding fragment of any one of **claims 1 to 4** which comprises a V_H chain corresponding to the sequence of SEQ ID NO:117 and a V_L chain corresponding to the sequence of SEQ ID NO:170.
6. The anti-CD40 antibody or binding fragment of any one of **claims 1 to 5**, which is an IgG, optionally an IgG₁.
7. The anti-CD40 antibody of **claim 6**, which is an IgG₁ and comprises a variant CH2 region comprising the amino acid substitution V273E or V273Y.
8. The anti-CD40 antibody of **claim 6 or 7**, which is an IgG₁ and comprises a variant Fc region comprising the amino acid substitutions D356E and L358M.
9. The anti-CD40 antibody of any one of **claims 6 to 8** comprising a kappa light chain constant region.
10. The anti-CD40 antibody of any one of **claims 1 to 9** having a heavy chain sequence according to any one of SEQ ID NOS:130-135, and light chain sequence according to any one of SEQ ID NOS:140-142.
11. The anti-CD40 antibody of **claim 10** having a heavy chain sequence according to SEQ ID NOS:130 or 131, and a light chain sequence according to SEQ ID NO:140.
12. The anti-CD40 antibody of **claim 10** having a heavy chain sequence according to SEQ ID NOS:132 or 133, and a light chain sequence according to SEQ ID NO:141.
13. The anti-CD40 antibody of **claim 10** having a heavy chain sequence according to SEQ ID NOS:132 or 133, and a light chain sequence according to SEQ ID NO:142.

14. A pharmaceutical composition comprising an anti-CD40 antibody or binding fragment of any one of **claims 1 to 13**, and a pharmaceutically acceptable carrier.
15. A method of treating a cancer, comprising administering to a patient in need thereof an anti-CD40 antibody or binding fragment of any one of **claims 1 to 13**, or a pharmaceutical composition according to **claim 14**.
16. A nucleic acid comprising a nucleotide sequence encoding an anti-CD40 antibody or binding fragment of any one of **claims 1 to 13**.
17. A vector comprising the nucleic acid of **claim 16**.
18. A prokaryotic host cell transformed with the vector of **claim 17**.
19. A eukaryotic host cell transformed with the vector of **claim 17**.
20. A eukaryotic host cell engineered to express the nucleic acid of **claim 16**.
21. The eukaryotic host cell of **claim 20** which is a mammalian host cell.
22. A method of producing an anti-CD40 antibody or binding fragment thereof, comprising: (a) culturing the host cell of **claim 19** or **claim 20** and (b) recovering the antibody or binding fragment.
23. A method of activating the immune system, comprising administering to a patient in need thereof an anti-CD40 antibody or binding fragment of any one of **claims 1 to 13**, or a pharmaceutical composition according to **claim 14**.