CLAIMS

1. A monoclonal antibody which binds human c-Met, wherein the antibody comprises:
   a) a VH region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:34, 35 and 36 and a VL region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:38, 39 and 40, (**024**), or
   b) a VH region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:74, 75 and 76 and a VL region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:78, 79 and 80, (**062**), or
   c) a VH region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:82, 83 and 84 and a VL region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:86, 87 and 88, (**064**), or
   d) a VH region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:90, 91 and 92 and a VL region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:94, 95 and 96, (**068**), or
   e) a VH region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:98, 99 and 100 and a VL region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:102, 103 and 104, (**069**), or
   f) a VH region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:130, 131 and 132 and a VL region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:134, 135 and 136, (**181**)
   g) a VH region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:114, 115 and 116 and a VL region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:118, 119 and 120 (**098**), or
   h) a VH region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:122, 123 and 124 and a VL region comprising the CDR1, 2 and 3 sequences of SEQ ID NO:126, 127 and 128 (**101**).

2. The antibody of claim 1 comprising:
   a) a VH region comprising the sequence of SEQ ID NO:33 and a VL region comprising the sequence of SEQ ID NO:37 (**024**)
   b) a VH region comprising the sequence of SEQ ID NO:73 and a VL region comprising the sequence of SEQ ID NO:77 (**062**)
   c) a VH region comprising the sequence of SEQ ID NO:81 and a VL region comprising the sequence of SEQ ID NO:85 (**064**)
   d) a VH region comprising the sequence of SEQ ID NO:89 and a VL region comprising the sequence of SEQ ID NO:93 (**068**)

e) a VH region comprising the sequence of SEQ ID NO:97 and a VL region comprising the sequence of SEQ ID NO:101 (**069**)
f) a VH region comprising the sequence of SEQ ID NO:113 and a VL region comprising the sequence of SEQ ID NO:117 (**098**)
g) a VH region comprising the sequence of SEQ ID NO:121 and a VL region comprising the sequence of SEQ ID NO:125 (**101**)
h) a VH region comprising the sequence of SEQ ID NO:129 and a VL region comprising the sequence of SEQ ID NO:133 (**181**) or
i) a variant of any of said antibodies, wherein said variant preferably has at most 1, 2 or 3 amino-acid modifications, more preferably amino-acid substitutions, such as conservative amino-acid substitutions in said sequences.

3. The antibody of any one of claims 1 or 2, wherein the antibody binds to the SEMA domain of c-Met, preferably wherein the antibody is able to inhibit binding of HGF to the SEMA domain with an IC50 of less than 10 µg/mL, such as less than 2 µg/mL as described in Example 18.

4. The antibody of any one of the preceding claims, wherein the antibody binds to A431 cells with an EC50 of 10 nM or less, such as an EC50 of 2 nM or less, preferably as determined according to Example 13.

5. The antibody of claim 4, wherein the antibody is a bivalent antibody.

6. The antibody of any one of the preceding claims, wherein the antibody binds to c-Met with an affinity constant (K_D) of 20 nM or less, such as an affinity of 5 nM or less, preferably as determined according to Example 14.

7. The antibody of any one of the preceding claims, wherein the antibody inhibits binding of HGF to the extracellular domain of c-Met, preferably wherein the antibody inhibits binding more than 40%, such as more than 50%, e.g. more than 60%, e.g. more than 70%, e.g. more than 80%, e.g. more than 90%, as determined according to Example 16.

8. The antibody of any one of the preceding claims, wherein the antibody is capable to inhibit the viability of KP4 cells, preferably wherein the antibody is capable to inhibit the viability more than 10%, such as more than 25%, e.g. more than 40%, preferably as described in Example 19.

9. The antibody of any one of the preceding claims, wherein the antibody is a full-length antibody, preferably an IgG1 antibody, in particular an IgG1,κ antibody.

10. The antibody of any one of the preceding claims, wherein the antibody is conjugated to another moiety, such as a cytotoxic moiety, a radioisotope or a drug.

11. The antibody of any one of the preceding claims, wherein the antibody is an effector-function-deficient antibody, e.g. a stabilized human IgG4 antibody, such as an antibody wherein arginine at position 409 in the heavy chain constant region of human IgG4 is substituted with lysine, threonine, methionine, or leucine, preferably lysine and/or wherein the hinge region comprises a Cys-Pro-Pro-Cys sequence.

12. The antibody of any one of the preceding claims, wherein the antibody is a monovalent antibody.

13. The antibody of claim 12, wherein the monovalent antibody comprises
(i) a variable region of an antibody of claims 1 or 2 or an antigen binding part of the said region, and
(ii) a C_H region of an immunoglobulin or a fragment thereof comprising the C_H2 and C_H3 regions, wherein the C_H region or fragment thereof has been modified such that the region corresponding to the hinge region and, if the immunoglobulin is not an IgG4 subtype, other regions of the C_H region, such as the C_H3 region, do not comprise any amino acid residues, which are capable of forming disulfide bonds with an identical C_H region or other covalent or stable non-covalent inter-heavy chain bonds with an identical C_H region in the presence of polyclonal human IgG.

14. The antibody of any one of the preceding claims, wherein the antibody has been modified to make it less flexible, such as by hinge region mutations.

15. The antibody of claim 14, wherein the antibody is of the IgG1 subtype, and wherein the hinge region has been modified by:
(i) deleting the hinge region of the sequence EPKSCDKTHTCPPCP and substituting it with the IgG2 hinge region of the sequence: ERKCCVECPPCP (IgG1 Hinge-IgG2);
(ii) deleting position 220 so the modified hinge region has the sequence of EPKSDKTHTCPPCP (IgG1 ΔC220);
(iii) substituting cysteine at position 220 with any other natural amino acid (X) so the modified hinge region has the sequence of EPKSXDKTHTCPPCP (IgG1 C220X);

(iv) deleting the hinge region of sequence EPKSCDKTHTCPPCP (UniBody IgG1);
(v) deleting the hinge region of the sequence EPKSCDKTHTCPPCP and substituting it with the IgG3 hinge region of the sequence ELKTPLGDTTHTCPRCPEPKSCDTPPPCPRCPEPKSCDTPPPCPRCPEPKSCDTPPPCPRCP (IgG1 Hinge-IgG3); or
(vi) substituting threonine at position 223 with cysteine, and deleting lysine at position 222 and threonine at position 225, so the modified hinge region has the sequence of EPKSCDCHCPPCP (IgG1 TH7Δ6-9).

16. The antibody of claim 15, wherein the hinge region has been modified by substituting cysteine at position 220 with serine so the modified hinge region has the sequence of EPKSSDKTHTCPPCP (IgG1 C220S).

17. The antibody of any one of the preceding claims, wherein the antibody has been modified to reduce core-fucosylation below 10%, such as below 5%, as determined by high performance anion-exchange chromatography coupled with pulsed amperometric detection (HPAEC-PAD).

18. The antibody of any one of the preceding claims, wherein the antibody is a bispecific antibody, comprising a c-Met binding site, as defined in any one of the preceding claims, and a second antigen-binding site having a different binding specificity.

19. The bispecific antibody of claim 18 wherein the second antigen-binding site has a binding specificity for a human effector cell, a human Fc receptor, a B cell receptor or a non-overlapping epitope of c-Met.

20. A nucleotide sequence encoding the VH and VL region of an antibody of claim 2.
21. An expression vector comprising a nucleotide sequence according to claim 20, wherein the vector further encodes an operately-linked constant region of a light chain, constant region of a heavy chain or both light and heavy chains of an antibody.

22. A recombinant eukaryotic or prokaryotic host cell which produces an antibody as defined in any one of claims 1 to 19.

23. A pharmaceutical composition comprising an antibody as defined in any of claims 1 to 19 and a pharmaceutically acceptable carrier.

24. The antibody of any of one claims 1 to 19 for use as a medicament.

25. Use of the antibody of any of one claims 1 to 19 in the manufacture of a medicament for the treatment of cancer, such as an HGF-dependent cancer or an HGF-independent cancer.

26. A method for producing an antibody of any of claims 1 to 19, said method comprising the steps of
a) culturing a host cell of claim 22, and
b) purifying the antibody from the culture media.

27. A method for detecting the presence of c-Met in a sample, comprising:
- contacting the sample with an antibody of any one of claims 1 to 19 under conditions that allow for formation of a complex between the antibody and c-Met; and
- analyzing whether a complex has been formed.

28. A kit for detecting the presence of c-Met in a sample comprising
- an antibody of any of claims 1 to 19; and
- instructions for use of the kit.

29. An anti-idiotypic antibody against an antibody according to any one of the claims 1 to 17.