CLAIMS

1. Use of a progastrin-binding antibody, or an antigen-binding fragment thereof, in the manufacture of a medicament for the treatment of lung cancer.

2. The use according to claim 1, wherein said progastrin-binding antibody, or antigen-binding fragment thereof, is selected among single chain antibodies, camelized antibodies, IgA1 antibodies, IgA2 antibodies, IgD antibodies, IgE antibodies, IgG1 antibodies, IgG2 antibodies, IgG3 antibodies, IgG4 antibodies and IgM antibodies.

3. The use according to any one of claims 1 or 2, wherein said progastrin-binding antibody, or an antigen-binding fragment thereof, is selected among N-terminal anti-progastrin antibodies and C-terminal anti-progastrin antibodies.

4. The use according to any one of claims 1 to 3, wherein said progastrin-binding antibody, or an antigen-binding fragment thereof, is a neutralizing antibody.

5. The use according to any one of claims 1 to 4, wherein said antibody is selected in the group consisting of:

   - An antibody comprising a heavy chain CDR-H1, CDR-H2 and CDR-H3 of amino acid sequences SEQ ID N°4, 5 and 6, respectively, and a light chain comprising CDR-L1, CDR-L2 and CDR-L3 of amino acid sequences SEQ ID N°7, 8 and 9, respectively,

   - An antibody comprising a heavy chain comprising CDR-H1, CDR-H2 and CDR-H3 of amino acid sequences SEQ ID N°10, 11 and 12, respectively, and a light chain comprising CDR-L1, CDR-L2 and CDR-L3 of amino acid sequences SEQ ID N°13, 14 and 15, respectively,

   - An antibody comprising a heavy chain comprising CDR-H1, CDR-H2 and CDR-H3 of amino acid sequences SEQ ID N°16, 17 and 18, respectively, and a light chain comprising CDR-L1, CDR-L2 and CDR-L3 of amino acid sequences SEQ ID N°19, 20 and 21, respectively,

   - An antibody comprising a heavy chain comprising CDR-H1, CDR-H2 and CDR-H3 of amino acid sequences SEQ ID N°22, 23 and 24, respectively, and

a light chain comprising CDR-L1, CDR-L2 and CDR-L3 of amino acid sequences SEQ ID N°25, 26 and 27, respectively,

- An antibody comprising a heavy chain comprising CDR-H1, CDR-H2 and CDR-H3 of amino acid sequences SEQ ID N°28, 29 and 30, respectively, and a light chain comprising CDR-L1, CDR-L2 and CDR-L3 of amino acid sequences SEQ ID N°31, 32 and 33, respectively, and

- An antibody comprising a heavy chain comprising CDR-H1, CDR-H2 and CDR-H3 of amino acid sequences SEQ ID N°34, 35 and 36, respectively, and a light chain comprising CDR-L1, CDR-L2 and CDR-L3 of amino acid sequences SEQ ID N°37, 38 and 39, respectively,

wherein said antigen binding fragment comprises the 6 CDRs of the antibody it derives from.

6. The use according to any one of claims 1 to 5, wherein said antibody is selected in the group consisting of:

- A monoclonal antibody comprising a heavy chain variable region of amino acid sequence SEQ ID N°41 and a light chain variable region of amino acid sequence SEQ ID N°42;
- A monoclonal antibody comprising a heavy chain variable region of amino acid sequence SEQ ID N°43 and a light chain variable region of amino acid sequence SEQ ID N°44;
- A monoclonal antibody comprising a heavy chain variable region of amino acid sequence SEQ ID N°45 and a light chain variable region of amino acid sequence SEQ ID N°46;
- A monoclonal antibody comprising a heavy chain variable region of amino acid sequence SEQ ID N°47 and a light chain variable region of amino acid sequence SEQ ID N°48;
- A monoclonal antibody comprising a heavy chain variable region of amino acid sequence SEQ ID N°49 and a light chain variable region of amino acid sequence SEQ ID N°50; and

- A monoclonal antibody comprising a heavy chain variable region of amino acid sequence SEQ ID N°51 and a light chain variable region of amino acid sequence SEQ ID N°52.

7. The use according to any one of claims 1 to 5, wherein said antibody is a humanized antibody.

8. The use according to claim 7, wherein said antibody is selected in the group consisting of:

- A humanized antibody comprising a heavy chain variable region of amino acid sequence SEQ ID N°53, and a light chain variable region of amino acid sequence SEQ ID N°54;
- A humanized antibody comprising a heavy chain variable region of amino acid sequence SEQ ID N°55, and a light chain variable region of amino acid sequence SEQ ID N°56;
- A humanized antibody comprising a heavy chain variable region of amino acid sequence selected between SEQ ID N°57, 58, and 59, and a light chain variable region of amino acid sequence selected between SEQ ID N°60, 61, and 62;
- A humanized antibody comprising a heavy chain variable region of amino acid sequence selected between SEQ ID N°63, 64, and 65, and a light chain variable region of amino acid sequence selected between SEQ ID N°66, 67, and 68;
- A humanized antibody comprising a heavy chain variable region of amino acid sequence selected between SEQ ID N°69 and 71, and a light chain variable region of amino acid sequence selected between SEQ ID N°70 and 72; and
- A humanized antibody comprising a heavy chain variable region of amino acid sequence selected between SEQ ID N°75 and 76, and a light chain variable region of amino acid sequence selected between SEQ ID N°77 and 78;

wherein said antibody also comprises constant regions of the light-chain and the heavy-chain derived from a human antibody.

9. The use according to any one of claims 7 or 8, wherein said antibody comprises a heavy chain variable region of amino acid sequence SEQ ID N°71 and a light chain variable region of amino acid sequence SEQ ID N°72, said antibody also comprising constant regions of the light-chain and the heavy-chain derived from a human antibody.

10. The use according to any one of claims 7 to 9, wherein said antibody comprises a heavy chain of amino acid sequence SEQ ID N°73 and a light chain of amino acid sequence SEQ ID N°74.

11. Use of a pharmaceutical composition comprising the progastrin-binding antibody, or an antigen-binding fragment thereof, as defined in any one of claims 1 to 10, and a pharmaceutically acceptable carrier and/or an excipient, in the manufacture of a medicament for the treatment of lung cancer.

12. The use according to claim 11, wherein said pharmaceutical composition further comprises a second therapeutic agent.

13. The use according to claim 12, wherein said agent is a biological agent or a chemotherapeutic agent.

14. The use according to claim 13, wherein said biological agent is an anti-EGFR monoclonal antibody or an anti-VEGF monoclonal antibody.

15. The use according to claim 13, wherein said chemotherapeutic agent is selected in the group of alkylating agents, anti-metabolites, anti-tumor antibiotics, mitotic inhibitors, chromatin function inhibitors, anti-angiogenesis agents, anti-estrogens, anti-androgens and immunomodulators.