We claim:

1. Use of an antibody or antigen-binding fragment of an antibody that specifically binds human delta-like ligand 4 (Dll4) in the manufacture of a medicament for treating tumor or cancer, wherein the antibody or fragment thereof comprises a heavy chain variable region (HCVR) comprising heavy chain CDR1, CDR2 and CDR3 sequences of SEQ ID NOS:431, 433 and 435, respectively, or a light chain variable region (LCVR) comprising light chain CDR1, CDR2 and CDR3 sequences of SEQ ID NOS:439, 441 and 443, respectively.

2. The use of claim 1, wherein the antibody or fragment thereof comprises heavy chain CDR1, CDR2 and CDR3 sequences of SEQ ID NOS:431, 433 and 435, respectively, and light chain CDR1, CDR2 and CDR3 sequences of SEQ ID NOS:439,441 and 443, respectively.

3. The use of claim 1 or 2, wherein the antibody or fragment thereof comprises a HCVR comprising the amino acid sequence of SEQ ID NO:429 or 901.

4. The use of any one of claims 1 to 3, wherein the antibody or fragment thereof comprises a LCVR comprising the amino acid sequence of SEQ ID NO:437 or 903.

5. The use of any one of claims 1 to 4, wherein the antibody or fragment thereof comprises a HCVR/LCVR combination of SEQ ID NO:429/437 or SEQ ID NO:901/903.

6. Use of an antibody or antigen-binding fragment of an antibody that specifically binds human delta-like ligand 4 (Dll4) in the manufacture of a medicament for treating, ameliorating, or inhibiting pathological angiogenesis, wherein the antibody or fragment thereof comprises a heavy chain variable region (HCVR) comprising heavy chain CDR1, CDR2 and CDR3 sequences of SEQ ID NOS:431, 433 and 435, respectively, or a light chain variable region (LCVR) comprising light chain CDR1, CDR2 and CDR3 sequences of SEQ ID NOS:439, 441 and 443, respectively.

7. The use of claim 6, wherein the antibody or fragment thereof comprises heavy chain CDR1, CDR2 and CDR3 sequences of SEQ ID NOS:431, 433 and 435, respectively, and light chain CDR1, CDR2 and CDR3 sequences of SEQ ID NOS:439,441 and 443, respectively.

8. The use of claim 6 or 7, wherein the antibody or fragment thereof comprises a HCVR comprising the amino acid sequence of SEQ ID NO:429 or 901.

9. The use of any one of claims 6 to 8, wherein the antibody or fragment thereof comprises a LCVR comprising the amino acid sequence of SEQ ID NO:437 or 903.

10. The use of any one of claims 6 to 9, wherein the antibody or fragment thereof comprises a HCVR/LCVR combination of SEQ ID NO:429/437 or SEQ ID NO:901/903.

We claim:

1. An isolated human antibody or antibody fragment which specifically binds human delta-like 4 (hDII4), comprising heavy-chain CDR1, CDR2 and CDR3, which comprise the amino acid sequences of SEQ ID NOS:399, 401 and 403, respectively, and light-chain CDR1, CDR2 and CDR3, which comprise the amino acid sequences of SEQ ID NOS:407, 409 and 411, respectively, wherein said antibody or antibody fragment binds an epitope within the N-terminal domain of hDII4.

2. The human antibody or antibody fragment of claim 1 being capable of binding dimeric hDII4 with an affinity constant (KD) of about 75 pM or less, as measured by surface plasmon resonance.

3. An isolated human antibody fragment which specifically binds hDII4, comprising a heavy-chain variable region comprising the amino acid sequence of SEQ ID NO:397, and a light-chain variable region comprising the amino acid sequence of SEQ ID NO:405, wherein said antibody or antibody fragment binds an epitope within the N-terminal domain of hDII4.

4. The human antibody or antibody fragment of claim 3 being capable of binding dimeric hDII4 with a KD of about 75 pM or less, as measured by surface plasmon resonance.

5. A pharmaceutical composition comprising the antibody or antibody fragment of claim 1 and a pharmaceutically acceptable carrier.

6. A pharmaceutical composition comprising the antibody or antibody fragment of claim 3 and a pharmaceutically acceptable carrier.