demonstrate that the antibody binds tightly to GCP-2 (CXCL6), and is silent regarding binding to NAP-2 (CXCL7).

However, an antibody that is able to bind and neutralize all seven human ELR^+ CXC chemokines has not yet been disclosed. Targeting one or a few human ELR^+ CXC chemokines leaves open the opportunity for other ELR^+ CXC chemokines to elicit multiple biological functions. Neutralizing all seven ELR^+ CXC chemokines could impact the ability of $CXCR1^+$ or $CXCR2^+$ cells to migrate to sites of inflammation and could inhibit angiogenesis. Given the significant redundancy in the CXCR1 and CXCR2 receptor activation pathways, there is still a need for an antibody that binds all seven human ELR^+ CXC chemokines with specificity and with high affinity. There is a need for an antibody that neutralizes all seven human ELR^+ CXC chemokines. There is also a need for an antibody that is physically stable. It is therefore desirable to provide a septa-specific antibody that is able to bind and neutralize all seven human ELR^+ CXC chemokines, and is physically stable.

In one aspect, the present disclosure provides an antibody that binds human Gro-alpha, Gro-beta, Gro-gamma, ENA-78, GCP-2, NAP-2, and IL-8, the antibody comprising a light chain and a heavy chain, wherein the light chain comprises a light chain variable region (LCVR) and the heavy chain comprises a heavy chain variable region (HCVR), wherein the LCVR comprises LCDR1, LCDR2, LCDR3 and the HCVR comprises HCDR1, HCDR2, HCDR3, wherein LCDR1 is RASQSISNNLH (SEQ ID NO: 7), LCDR2 is YTSRSVS (SEQ ID NO: 8), LCDR3 is GQNNEWPEV (SEQ ID NO: 9), HCDR1 is GYEFTSYWIH (SEQ ID NO: 10), HCDR2 is NISPNSGSANYNEKFKS (SEQ ID NO: 11), and HCDR3 is EGPYSYYPSRXaaYYGSDL (SEQ ID NO: 20) wherein Xaa is E or Q.

In another aspect, the present disclosure provides a DNA molecule comprising a first polynucleotide sequence encoding a polypeptide having the amino acid sequence of SEQ ID NO: 1 or 13; and comprising a second polynucleotide sequence encoding a polypeptide having the amino acid sequence of SEQ ID NO: 3 or 15.

In another aspect, the present disclosure provides a mammalian cell comprising the DNA molecule as disclosed above, wherein the cell is capable of expressing an antibody as disclosed above.

In another aspect, the present disclosure provides a process for producing an antibody as disclosed above, the process comprising cultivating the mammalian cell as disclosed above under conditions such that the antibody is expressed, and recovering the expressed antibody.

In another aspect, the present disclosure provides an antibody produced by the process as disclosed above.

In another aspect, the present disclosure provides use of an antibody as disclosed above in the manufacture of a medicament for the treatment of ulcerative colitis, renal cancer, or ovarian cancer.

In another aspect, the present disclosure provides an antibody as disclosed above for use in therapy.

In another aspect, the present disclosure provides an as disclosed above for use in the treatment of ulcerative colitis, renal cancer, or ovarian cancer.

The present invention provides an antibody that neutralizes human Gro-alpha, Gro-beta, Gro-gamma, ENA-78, GCP-2, NAP-2, and IL-8. The present invention also provides an antibody that neutralizes human Gro-alpha, Gro-beta, Gro-gamma, ENA-78, GCP-2, NAP-2, and IL-8, wherein the antibody binds IL-8 (SEQ ID NO: 27) at the following amino acids: Arg 6, Ile 10, Ala 35, Ile 40. The present invention further provides an antibody that neutralizes human Gro-alpha, Gro-beta, Gro-gamma, ENA-78, GCP-2, NAP-2, and IL-8, wherein the antibody binds IL-8 (SEQ ID NO: 27) at the following amino acids: Arg 6, Ile 10, Ala 35, Ile 40, and Leu 49.

The present invention provides an antibody comprising a light chain and a heavy chain, wherein the light chain comprises a light chain variable region (LCVR) and the heavy chain comprises a heavy chain variable region (HCVR), wherein the LCVR comprises LCDR1, LCDR2, LCDR3 and the HCVR comprises HCDR1, HCDR2, HCDR3, wherein LCDR1 is RASQSISNNLH (SEQ ID NO: 7), LCDR2 is YTSRSVS (SEQ ID NO: 8), LCDR3 is GQNNEWPEV (SEQ ID NO: 9), HCDR1 is GYEFTSYWIH (SEQ ID NO: 10), HCDR2 is NISPNSGSANYNEKFKS (SEQ ID NO: 11), and HCDR3 is EGPYSYYPSRXaaYYGSDL (SEQ ID NO: 20) wherein Xaa is E or Q.

The present invention provides in another aspect an antibody wherein the amino acid sequence of the HCVR is SEQ ID NO: 2 or SEQ ID NO: 14. The present invention

WE CLAIM:

~~1. An antibody that neutralizes human Gro-alpha, Gro-beta, Gro-gamma, ENA-78, GCP-2, NAP-2, and IL-8.~~

~~2. The antibody of claim 1, wherein the antibody binds IL-8 (SEQ ID NO: 27) at the following amino acids: Arg 6, Ile 10, Arg 35, Ile 40.~~

~~3. The antibody of claim 2, wherein the antibody further binds IL-8 (SEQ ID NO: 27) at Leu 49.~~

~~4. The antibody according to any of claims 1-3, wherein the antibody comprises a light chain, wherein the light chain comprises a light chain variable region (LCVR), wherein the LCVR comprises LCDR1 (RASQSISNNLH (SEQ ID NO: 7)), LCDR2 (YTSRSVS (SEQ ID NO: 8)), and LCDR3 (GQNNEWPEV (SEQ ID NO: 9)) and a heavy chain, wherein the heavy chain comprises a heavy chain variable region (HCVR), wherein the HCVR comprises HCDR1 (GYEFTSYWIH (SEQ ID NO: 10)), HCDR2 (NISPNSGSANYNEKFKS (SEQ ID NO: 11)), and HCDR3 (EGPYSYYPSRXaaYYGSDL (SEQ ID NO: 20)) wherein Xaa is E or Q.~~

~~5. The antibody according to any of claims 1-4, wherein the amino acid sequence of the LCVR is SEQ ID NO: 4 or 16 and the HCVR is SEQ ID NO: 2 or SEQ ID NO: 14.~~

~~6. The antibody according to any of claims 1-5, wherein the antibody comprises a light chain and a heavy chain, wherein the amino acid of the light chain is SEQ ID NO: 3 or 15, and wherein the amino acid of the heavy chain is SEQ ID NO: 1 or 13.~~

~~7.~~1. An antibody that binds human Gro-alpha, Gro-beta, Gro-gamma, ENA-78, GCP-2, NAP-2, and IL-8, the antibody comprising a light chain and a heavy chain, wherein the light chain comprises a light chain variable region (LCVR) and the heavy chain comprises a heavy chain variable region (HCVR), wherein the LCVR comprises LCDR1, LCDR2, LCDR3 and the HCVR comprises HCDR1, HCDR2, HCDR3, wherein LCDR1 is RASQSISNNLH (SEQ ID NO: 7), LCDR2 is YTSRSVS (SEQ ID NO: 8), LCDR3 is GQNNEWPEV (SEQ ID NO: 9), HCDR1 is GYEFTSYWIH (SEQ ID NO: 10), HCDR2 is NISPNSGSANYNEKFKS (SEQ

ID NO: 11), and HCDR3 is EGPYSYYPSRXaaYYGSDL (SEQ ID NO: 20) wherein Xaa is E or Q.

8.2. The antibody of Claim 17, wherein the amino acid sequence of the HCVR is SEQ ID NO: 2 or SEQ ID NO: 14.

9.3. The antibody of Claim 17, wherein the amino acid sequence of the LCVR is SEQ ID NO: 4 or 16.

10.4. The antibody of Claim 17, wherein the amino acid sequence of the HCVR is SEQ ID NO: 2 and the amino acid sequence of the LCVR is SEQ ID NO: 4.

11.5. The antibody of claim 17, wherein the amino acid sequence of the heavy chain is SEQ ID NO: 1 and the amino acid sequence of the light chain is SEQ ID NO: 3.

12.6. The antibody of claim 17, wherein the antibody comprises two heavy chains having the amino acid sequence of SEQ ID NO: 1 and two light chains having the amino acid sequence of SEQ ID NO: 3.

13.7. A DNA molecule comprising a first polynucleotide sequence encoding a polypeptide having the amino acid sequence of SEQ ID NO: 1 or 13; and comprising a second polynucleotide sequence encoding a polypeptide having the amino acid sequence of SEQ ID NO: 3 or 15.

14.8. A mammalian cell comprising the DNA molecule of Claims 713, wherein the cell is capable of expressing an antibody of any of Claims 1-612.

15.9. A process for producing an antibody according to any of claims 1-612, the process comprising cultivating the mammalian cell of Claim 814 under conditions such that the antibody is expressed, and recovering the expressed antibody.

16.10. An antibody produced by the process of Claim 915.

17.11. Use of an antibody according to any of claims 1-6 and 10 in the manufacture of a medicament for the treatment ofA method of treating ulcerative colitis, renal cancer, or ovarian cancer in a patient, comprising administering to the patient a therapeutically effective amount of an antibody according to any of claims 1-12 and 16.

18.12. An antibody according to any of claims 1-612 and 106 for use in therapy.

19.13. An antibody according to any of claims 1-612 and 106 for use in the treatment of ulcerative colitis, renal cancer, or ovarian cancer.