

CLAIMS

1. An anti-APRIL antibody molecule, comprising a heavy chain variable region (VH) comprising the amino acid sequence of SEQ ID NO: 296, and a light chain variable region (VL) comprising the amino acid sequence of SEQ ID NO: 286.

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2. The antibody molecule of claim 1, which is a synthetic or isolated antibody molecule, and/or is a humanized antibody molecule.

3. The antibody molecule of any of claims 1-2, which comprises a heavy chain constant region of IgG1, IgG2, IgG3, or IgG4, and/or comprises a light chain constant region of kappa or lambda light chain.

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4. The antibody molecule of any of claims 1-3, which comprises a heavy chain constant region of IgG2.

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5. The antibody molecule of any of claims 1-4, which comprises an Fc region.

6. The antibody molecule of any of claims 1-5, which comprises two heavy chain variable regions and two light chain variable regions, or is a Fab, F(ab')₂, Fv, Fd, or a single chain Fv fragment (scFv).

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7. A pharmaceutical composition comprising an antibody molecule of any of claims 1-6 and a pharmaceutically acceptable carrier.

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8. A nucleic acid molecule encoding a heavy chain variable region (VH) and a light chain variable region (VL) of an antibody molecule of any of claims 1-6.

9. A vector comprising a nucleic acid molecule of claim 8.

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10. An isolated cell comprising (i) a nucleic acid molecule of claim 8, (ii) a nucleic acid molecule encoding a heavy chain variable region (VH) and a nucleic acid molecule encoding a

light chain variable region (VL), of an antibody molecule of any of claims 1-6, or (iii) a vector of claim 9.

5 11. A kit comprising an antibody molecule of any of claims 1-6 and instructions to use of the antibody molecule.

12. A container comprising an antibody molecule of any of claims 1-6, or a composition of claim 7.

10 13. A method of producing an anti-APRIL antibody molecule, the method comprising culturing a cell of claim 10 under conditions that allow production of an antibody molecule, thereby producing the antibody molecule, optionally, further comprising isolating or purifying the antibody molecule.

15 14. Use of an antibody molecule of any of claims 1-6, or a composition of claim 7, for the manufacture of a medicament for treating IgA nephropathy in a subject.

15. The use of claim 14, wherein the antibody molecule is administered to the subject intravenously or subcutaneously, and/or is administered to the subject at a dose between 0.1
20 mg/kg and 50 mg/kg, between 0.2 mg/kg and 25 mg/kg, between 0.5 mg/kg and 10 mg/kg, between 0.5 mg/kg and 5 mg/kg, between 0.5 mg/kg and 3 mg/kg, between 0.5 mg/kg and 2.5 mg/kg, between 0.5 mg/kg and 2 mg/kg, between 0.5 mg/kg and 1.5 mg/kg, between 0.5 mg/kg and 1 mg/kg, between 1 mg/kg and 1.5 mg/kg, between 1 mg/kg and 2 mg/kg, between 1 mg/kg and 2.5 mg/kg, between 1 mg/kg and 3 mg/kg, between 1 mg/kg and 10 mg/kg, or between 1
25 mg/kg and 5 mg/kg, or 1 mg/kg, 2 mg/kg, 4 mg/kg, or 8 mg/kg, or

at a fixed dose between 10 mg and 1000 mg, between 10 mg and 500 mg, between 10 mg and 250 mg, between 10 mg and 150 mg, between 10 mg and 100 mg, between 10 mg and 50 mg, between 250 mg and 500 mg, between 150 mg and 500 mg, between 100 mg and 500 mg, between 50 mg and 500 mg, between 25 mg and 250 mg, between 50 mg and 150 mg, between
30 50 mg and 100 mg, between 100 mg and 150 mg. between 100 mg and 200 mg, or between 150 mg and 250 mg,

optionally, wherein the antibody molecule is administered once a week, twice a week, once every two weeks, or once every four weeks, or once a month, once every two months, or once every three months.

- 5 16. The use of claim 14 or 15, wherein administration of the antibody molecule:
- (i) reduces the level of IgA in a peripheral tissue, optionally, wherein the peripheral tissue is serum, mucosal tissue, bone marrow, or any combination thereof, and/or
- (ii) reduces the level of a variant of IgA, optionally, wherein the variant of IgA is IgA1, IgA1 in polymeric form (pIgA1), IgA1 with an O-linked glycosylation variant, or any
- 10 combination thereof.

17. The use of any of claims 14-16, wherein the level of IgA is determined in a peripheral tissue sample from the subject, optionally, wherein the peripheral tissue is serum, mucosal tissue, or bone marrow.

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18. A method of detecting an APRIL molecule, the method comprising contacting a cell or a sample from a subject with an antibody molecule of any of claims 1-6, thereby detecting the APRIL molecule, wherein the APRIL molecule is detected *in vitro* or *ex vivo*, optionally, wherein the antibody molecule is coupled with a detectable label