What is claimed is:

1. A method of treating a subject having multiple myeloma (MM), the method comprising administering to the subject one or more doses of an antibody, or antigen binding fragment thereof, that specifically binds to a B cell maturation antigen (BCMA), and wherein the one or more doses are independently administered to the subject at about 100 mg of the antibody or antigen-binding fragment to about 2,000 mg of the antibody or antigen-binding fragment.

2. The method of claim 1, wherein the antibody or antigen-binding fragment thereof is a non-fucosylated antibody or antigen-binding fragment.

3. The method of claim 1 or 2, wherein a composition comprising the antibody or antigen-binding fragment thereof is administered to the subject, about or at least 95%, 97%, 98% or 99% of the antibody or antigen-binding fragment thereof in the composition are afucosylated.

4. The method of any one of claims 1-3, wherein the antibody or antigen binding-fragment thereof, comprises:

a heavy chain variable region comprising a CDR1 comprising SEQ ID NO: 1, a CDR2 comprising SEQ ID NO: 2, and a CDR3 comprising SEQ ID NO: 3, and

a light chain variable domain comprising a CDR1 comprising SEQ ID NO: 5, a CDR2 comprising SEQ ID NO: 6, and a CDR3 comprising SEQ ID NO: 7.

5. The method of any one of claims 1-4, wherein the antibody or the antigen-binding fragment thereof comprises a heavy chain variable domain comprising an amino acid sequence that is at least 80% identical to SEQ ID NO: 4 and a light chain variable domain comprising an amino acid sequence that is at least 80% identical to SEQ ID NO: 8.

6. The method of claim 5, wherein the antibody or the antigen-binding fragment thereof comprises a heavy chain variable domain comprising an amino acid sequence that is at least 90% identical to SEQ ID NO: 4 and a light chain variable domain comprising an amino acid sequence that is at least 90% identical to SEQ ID NO: 8.

7. The method of claim 6, wherein the antibody or the antigen-binding fragment thereof comprises a heavy chain variable domain comprising an amino acid sequence of SEQ ID NO: 4 and a light chain variable domain comprising an amino acid sequence of SEQ ID NO: 8.

8. The method of any one of claims 1-6, wherein the antibody or the antigen-binding fragment is humanized.

9. The method of any one of claims 1-8, wherein the antibody is an IgG1 antibody.

10. The method of any one of claims 1-8, wherein the antibody or antigen-binding fragment is not a bispecific antibody, a bispecific T cell engager (BiTE), a chimeric antigen receptor (CAR), or an antibody drug conjugate (ADC), or a portion thereof.

11. The method of any one of claims 1-10, wherein the one or more doses are independently administered to the subject at about 800 mg of the antibody or antigen-binding fragment to about 2,000 mg of the antibody or antigen-binding fragment.

12. The method of any one of claims 1-10, wherein the one or more doses are independently administered to the subject at about 1,200 mg of the antibody or antigen-binding fragment to about 2,000 mg of the antibody or antigen-binding fragment.

13. The method of any one of claims 1-10, wherein the one or more doses are independently administered to the subject at about 1,400 mg of the antibody or antigen-binding fragment to about 1,800 mg of the antibody or antigen-binding fragment.

14. The method of any one of claims 1-10, wherein the one or more doses are independently administered to the subject at about 400 mg of the antibody or antigen-binding fragment.

15. The method of any one of claims 1-10, wherein the one or more doses are independently administered to the subject at about 800 mg of the antibody or antigen-binding fragment.

16. The method of any one of claims 1-10, wherein the one or more doses are administered to the subject at about 1,600 mg of the antibody or antigen-binding fragment.

17. The method of any one of claims 1-16, wherein two or more doses of the antibody or antigen-binding fragment are administered to the subject.

18. The method of claim 17, wherein the two or more doses are administered to the subject at a frequency of between once a week and about once every four weeks.

19. The method of claim 17, wherein the two or more doses are administered to the subject at a frequency of about once a week.

20. The method of claim 17, wherein the two or more doses are administered to the subject at a frequency of about once every two weeks.

21. The method of claim 17, wherein the two or more doses are administered to the subject at a frequency of about once every three weeks.

22. The method of claim 17, wherein the two or more doses are administered to the subject at a frequency of about once every four weeks.

23. The method of any one of claims 1-18, wherein each dose comprises 800 mg of the antibody or antigen-binding fragment and is administered to the subject every 2 weeks.

24. The method of any one of claims 1-18, wherein each dose comprises 1600 mg of the antibody or antigen-binding fragment and is administered to the subject every 2 weeks.

25. The method of any one of claims 1-18, wherein individual doses of the antibody or antigen-binding fragment are administered to the subject on day 1 and day 15 of a 28-day cycle.

26. The method of claim 25, wherein the doses of the antibody or antigen-binding fragment are administered to the subject for multiple 28-day cycles.

27. The method of any one of claims 1-17, wherein the one or more doses comprise one or more induction doses that are administered to the subject during an induction phase and one or more maintenance doses that are administered to the subject during a maintenance phase after the one or more induction doses have been administered.

28. The method of claim 27, wherein one of the induction doses is administered to the subject about once a week for about 1-10 weeks.

29. The method of claim 27, wherein one of the induction doses is administered to the subject once a week for 8 weeks.

30. The method of claim 27, wherein one of the induction doses is administered 4 times within a 28-day cycle.

31. The method of claim 27, wherein one of the induction doses is administered 8 times within two 28-day cycles.

32. The method of claim 27, wherein one of the induction doses is independently administered on day 1, day 8, day 15 and day 22 for each of two 28-day cycles.

33. The method of any one of claims 27-32, wherein each induction dose comprises 100, 200, 400, 800, or 1600 mg of the antibody or antigen-binding fragment.

34. The method of claim 33, wherein each induction dose comprises 800 mg of the antibody or antigen-binding fragment.

35. The method of claim 33, wherein each induction dose comprises 1600 mg of the antibody or antigen-binding fragment.

36. The method of any one of claims 27-35, wherein the one or more maintenance doses are administered once every 1-4 weeks after completion of the induction phase.

37. The method of claim 36, wherein one of the maintenance doses is administered once every two weeks.

38. The method of claim 36, wherein one of the maintenance doses is administered on day 1 and day 15 of a 28-day cycle.

39. The method of any one of claims 36-38, wherein each maintenance dose comprises 100, 200, 400, 800, or 1600 mg of the antibody or antigen-binding fragment.

40. The method of claim 39, wherein each maintenance dose comprises 800 mg of the antibody or antigen-binding fragment.

41. The method of claim 39, wherein each maintenance dose comprises 1600 mg of the antibody or antigen-binding fragment.

42. The method of claim 27, wherein the antibody or antigen-binding fragment is dosed q1wk during the induction phase for a total of 8 induction phase doses and dosed q2wk during the maintenance phase.

43. The method of claim 27, wherein:

each induction dose comprises 100, 200, 400, or 1600 mg of the antibody or antigen-binding fragment;

each maintenance dose comprises 100, 200, 400, or 1600 mg of the antibody or antigen-binding fragment;

one of the induction doses is administered on each of day 1, day 8, day 15 and day 22 for each of two 28-day cycles for a total of 8 induction doses during the induction phase; and

one of the maintenance doses is administered on each of days 1 and day 15 of each of one or more subsequent cycles.

44. The method of claim 43, wherein each induction dose and each maintenance dose comprises 800 or 1600 mg of the antibody or antigen-binding fragment.

45. The method of claim 43, wherein each induction dose and each maintenance dose comprises 1600 mg of the antibody or antigen-binding fragment.

46. The method of any one of claims 1-45, wherein the method further comprises administering one or more doses of dexamethasone to the subject.

47. The method of claim 46, wherein the one or more doses of dexamethasone are independently administered to the subject at a frequency of once a week.

48. The method of claim 46, wherein one of the doses of the antibody or antigen-binding fragment are administered at a frequency of about once every 1-4 weeks and the doses of dexamethasone are administered at a frequency of about once every 1-4 weeks.

49. The method of claim 46, wherein one of the doses of the antibody or antigen binding fragment are administered once every two weeks and one of the doses of dexamethasone is administered once every two weeks.

50. The method of claim 46, wherein one of the doses of the antibody or antigen binding fragment is administered once every two weeks and one of the doses of dexamethasone is administered once every week.

51. The method of claim 46, wherein one of the doses of the antibody or antigen binding fragment is administered on each of day 1 and day 15 of a 28-day cycle and one of the doses of

dexamethasone is administered on each of day 1, day 8, day 15 and day 22 of the same 28-day cycle.

52. The method of claim 46, wherein:

one of the doses of the antibody or antigen-binding fragment is administered once a week during an induction phase with subsequent doses following the induction phase being administered once every two weeks during a maintenance phase; and

one of the doses of dexamethasone is administered once every week.

53. The method of claim 52, wherein:

one of the doses of the antibody or antigen-binding fragment is administered once a week for 8 weeks during the induction phase and subsequent doses are administered once every two weeks during the maintenance phase; and

one of the doses of dexamethasone is administered once every week.

54. The method of claim 46, wherein:

one of the doses of the antibody or antigen-binding fragment is administered on each of day 1, day 8, day 15, and day 22 of each of two 28-day cycles and then on each of day 1 and day 15 of subsequent 28-day cycles; and

one of the doses of dexamethasone is administered on each of day 1, day 8, day 15, and day 22 of each of the 28-day cycles.

55. The method of any one of claims 46-54, wherein when the antibody or antigen-binding fragment are administered on the same day then dexamethasone is administered about 1-3 hours before the antibody or antigen binding fragment is administered.

56. The method of any one of claims 46-55, wherein each dose of the antibody or antigen-binding fragment is administered as a 800 mg dose.

57. The method of any one of claims 46-55, wherein each dose of the antibody or antigen-binding fragment is administered as a 1600 mg dose.

58. The method of any one of claims 46-55, wherein each dose of dexamethasone is administered as a 20-60 mg dose.

59. The method of claim 58, wherein each dose of dexamethasone is administered as a 40 mg dose.

60. The method of claim 58, wherein each dose of dexamethasone is administered as a 20 mg dose.

61. The method of any one of claims 46-60, wherein each dose of the antibody or antigen-binding fragment is administered as a 1600 mg dose, and wherein each dose of dexamethasone is administered as a 40 mg dose.

62. The method of any one of claims 1-61, wherein the method further comprises administering one or more doses of an anti-CD38 antibody, or antigen-binding fragment thereof to the subject.

63. The method of claim 62, wherein the anti-CD38 antibody is daratumumab.

64. The method of claim 62 or 63, wherein the one or more doses of the anti-CD38 antibody or antigen-binding fragment thereof are independently administered to the subject at about 5 mg/kg (milligram per kilogram of the body weight) to about 30 mg/kg.

65. The method of claim 64, wherein the one or more doses of the anti-CD38 antibody or antigen-binding fragment thereof are independently administered to the subject at about 10 mg/kg to about 20 mg/kg.

66. The method of claim 64, wherein the one or more doses of the anti-CD38 antibody or antigen-binding fragment thereof are independently administered to the subject at about 16 mg/kg.

67. The method of any one of claims 62-66, wherein two or more doses of the anti-CD38 antibody or antigen-binding fragment are administered to the subject.

68. The method of claim 67, wherein the two or more doses of the anti-CD38 antibody or antigen-binding fragment thereof are administered to the subject at a frequency of about once a week to about once every four weeks.

69. The method of claim 67, wherein the two or more doses of the anti-CD38 antibody or antigen-binding fragment thereof are administered to the subject at a frequency of about once a week.

70. The method of claim 67, wherein the two or more doses of the anti-CD38 antibody or antigen-binding fragment thereof are administered to the subject at a frequency of about once every two weeks or once every three weeks.

71. The method of claim 67, wherein the two or more doses of the anti-CD38 antibody or antigen-binding fragment thereof are administered to the subject at a frequency of about once every four weeks.

72. The method of claim 67, wherein the anti-CD38 antibody or antigen-binding fragment thereof are administered to the subject on day 1, day 8, day 15 and day 22 for 28-day cycles.

73. The method of claim 67, wherein two or more doses of the anti-CD38 antibody or antigen-binding fragment thereof are administered to the subject at a frequency of about once every week during a first phase; two or more doses of the anti-CD38 antibody or antigen-binding fragment thereof are administered to the subject at a frequency of about once every two weeks to about once every three weeks during a second phase; and two or more doses of the anti-CD38 antibody or antigen-binding fragment thereof are administered to the subject at a frequency of about once every four weeks during a third phase.

74. The method of claim 73, wherein the first phase is about 6 weeks to about 10 weeks.

75. The method of claim 74, wherein the first phase is about 8 weeks or about 9 weeks.

76. The method of any one of claims 73-75, wherein the second phase is about 10 weeks to about 20 weeks.

77. The method of any one of claims 73-76, wherein 8 doses of the anti-CD38 antibody or antigen-binding fragment thereof are administered to the subject at a frequency of about once every two weeks during the second phase.

78. The method of any one of claims 73-76, wherein 5 doses of the anti-CD38 antibody or antigen-binding fragment thereof are administered to the subject at a frequency of about once every three weeks during the second phase.

79. The method of any one of claims 73-78, wherein multiple doses of the anti-CD38 antibody or antigen-binding fragment thereof are administered to the subject at a frequency of about once every four weeks during the third phase until disease progression.

80. The method of any one of claims 1-79, wherein the method further comprises administering one or more doses of an immunomodulatory drug.

81. The method of claim 80, wherein the immunomodulatory drug is an immunomodulatory imide drug (IMiD).

82. The method of claim 81, wherein the immunomodulatory drug is lenalidomide or pomalidomide.

83. The method of 82, wherein the immunomodulatory drug is pomalidomide.

84. The method of any one of claims 80-83, wherein the one or more doses of the immunomodulatory drug are independently administered to the subject at a frequency of about once per day to about once per week.

85. The method of any one of claims 80-83, wherein the one or more doses of the immunomodulatory drug are independently administered to the subject once per day.

86. The method of any one of claims 80-83, wherein the one or more doses of the immunomodulatory drug are independently administered to the subject once per day on Days 1-21 of repeated 28-day cycles.

87. The method of any one of claims 80-86, wherein each dose of the immunomodulatory drug is about 1 mg to about 10 mg.

88. The method of any one of claims 80-86, wherein each dose of the immunomodulatory drug is about 2 mg to about 4 mg.

89. The method of any one of claims 80-86, wherein each dose of the immunomodulatory drug is about 4 mg.

90. The method of any one of claims 80-86, wherein when a dose of the immunomodulatory drug and a dose of the antibody or antigen-binding fragment that specifically binds to BCMA are administered on the same day, the dose of the immunomodulatory drug is administered about 1 to about 3 hours before the dose of the antibody or antigen-binding fragment that specifically binds to BCMA.

91. The method of any one of claims 80-83 and 86-90, wherein the antibody or antigen-binding fragment that specifically binds to BCMA is administered to the subject on day 1 and day 15 of a 28-day cycle, dexamethasone is administered to the subject on day 1, 8, 15, and 22 of the 28-day cycle, and pomalidomide is administered to the subject on days 1-21 of the 28-day cycle.

92. The method of any one of claims 80-83 and 86-90, wherein one of the induction doses of the antibody or antigen-binding fragment that specifically binds to BCMA is administered on each of day 1, day 8, day 15 and day 22 for two 28-day cycles for a total of 8 induction doses during the induction phase; and one of the maintenance doses of the antibody or antigen-binding fragment that specifically binds to BCMA is administered on each of days 1 and day 15 of each of one or more subsequent 28-day cycles in the maintenance phase;

wherein dexamethasone is administered to the subject on each of day 1, 8, 15, and 22 of each 28-day cycle in the induction phase and the maintenance phase; and

wherein pomalidomide is administered to the subject on days 1-21 of each 28-day cycle in the induction phase and the maintenance phase.

93. The method of claim 91 or 92, wherein when a dose of dexamethasone and a dose of the antibody or antigen-binding fragment are administered on the same day or a dose of pomalidomide and a dose of the antibody or antigen-binding fragment are administered on the same day, the dose of dexamethasone or the dose of pomalidomide is administered about 1 to about 3 hours before the dose of the antibody or antigen-binding fragment.

94. The method of any one of claims 1-93, wherein the method further comprises administering one or more doses of a gamma-secretase inhibitor to the subject.

95. The method of claim 94, wherein the gamma-secretase inhibitor is Semagacestat (LY450139), RO4929097, MK-0752, Avagacestat (BMS-708163), BMS-986115, Nirogacestat (PF-03084014), Crenigacestat (LY3039478), BMS-906024, DAPT (GSI-IX), Dibenzazepine (YO-01027), LY411575, L-685,458, NGP 555, MDL-28170, or Itanapraced (CHF 5074).

96. The method of any one of claims 1-95, wherein each dose of the antibody or antigen-binding fragment is administered by systemic administration.

97. The method of claim 96, wherein the systemic administration is by intravenous administration.

98. The method of claim 96 or 97, wherein at least the initial dose of the antibody or antigen-binding fragment is administered to the subject using step-wise infusion.

99. The method of claim 98, wherein the step-wise infusion is performed using an infusion rate of about 50 mg/hour to about 400 mg/hour.

100. The method of claim 99, wherein, during the step-wise infusion, the infusion rate is increased every 30 minutes.

101. The method of claim 100, wherein, during the step-wise infusion, the infusion rate is increased no more than two-fold every 30 minute.

102. The method of any one of claims 1-101, wherein the subject is a human subject.

103. The method of claim 102, wherein the subject has previously been diagnosed as having multiple myeloma.

104. The method of any one of claims 1-103, wherein the subject has been diagnosed as having relapsed or refractory multiple myeloma.

105. The method of any one of claims1-94, wherein the subject was previously administered one or more therapeutic agents or treatments for multiple myeloma.

106. The method of claim 105, wherein the previously administered one or more therapeutic agents or treatments for multiple myeloma were unsuccessful.

107. The method of claim 106, wherein the subject has previously been administered at least one of a proteasome inhibitor, an immunomodulatory agent, and an anti-CD38 antibody, or cannot tolerate the foregoing.

108. The method of claim 107, wherein the subject has previously been administered therapeutic agents include all three of a proteasome inhibitor, an immunomodulatory agent, and an anti-CD38 antibody, or cannot tolerate the foregoing.

109. The method of claim 106, wherein the subject has previously been administered at least 3 prior lines of anti-myeloma therapy and is refractory to at least one therapeutic agent in each of the following classes: a proteasome inhibitor, an immunomodulatory agent, and an anti-CD38 antibody.

110. The method of any one of claims 1-109, wherein the subject satisfies 1, 2 or all 3 of the following criteria prior to initiating treatment: serum monoclonal paraprotein (M-protein) level of ≥0.5 g/dL, urine M-protein level ≥ 200mg/24 hr, and serum immunoglobulin free light chain ≥ 10 mg/dL and abnormal serum immunoglobulin kappa lambda free light chain ratio.

111. The method of any one of claims 1-110, wherein the method results in a steady-state concentration of the antibody, or antigen-binding fragment thereof, in the serum of the subject of about 1 μg/mL to about 200 μg/mL.

112. The method of any one of claims 1-111, wherein the method results in a steady-state concentration of free light chain (FLC) in the serum of the subject of less than 50 mg/dL.

113. The method of any one of claims 1-112, wherein the subject has received at least two prior lines of antimyeloma therapy and/or has documented IMWG (International Myeloma Working Group) disease progression on or within 60 days of completion of the two prior lines of antimyeloma therapy.

114. The method of any one of claims 1-113, wherein one or more therapeutic effects in the subject is improved after administration of the antibody-drug conjugate relative to a baseline.

115. The method of claim 114, wherein the one or more therapeutic effects is selected from the group consisting of: objective response rate, complete response rate, duration of

response, duration of complete response, time to response, progression free survival, and overall survival.

116. The method of claim 115, wherein the objective response rate is at least about 20%, at least about 25%, at least about 30%, at least about 35%, at least about 40%, at least about 45%, at least about 50%, at least about 60%, at least about 70%, or at least about 80%.

117. The method of claim 115, wherein the subject exhibits progression-free survival of at least about 1 month, at least about 2 months, at least about 3 months, at least about 4 months, at least about 5 months, at least about 6 months, at least about 7 months, at least about 8 months, at least about 9 months, at least about 10 months, at least about 11 months, at least about 12 months, at least about eighteen months, at least about two years, at least about three years, at least about four years, or at least about five years.

118. The method of claim 115, wherein the subject exhibits overall survival of at least about 1 month, at least about 2 months, at least about 3 months, at least about 4 months, at least about 5 months, at least about 6 months, at least about 7 months, at least about 8 months, at least about 9 months, at least about 10 months, at least about 11 months, at least about 12 months, at least about eighteen months, at least about two years, at least about three years, at least about four years, or at least about five years.

119. The method of claim 115, wherein the duration of response or the duration of complete response to the treatment is at least about 1 month, at least about 2 months, at least about 3 months, at least about 4 months, at least about 5 months, at least about 6 months, at least about 7 months, at least about 8 months, at least about 9 months, at least about 10 months, at least about 11 months, at least about 12 months, at least about eighteen months, at least about two years, at least about three years, at least about four years, or at least about five years.

120. A kit comprising:

(a) one or more doses of a pharmaceutical composition comprising (i) an antibody, or antigen binding fragment thereof, that specifically binds to a B cell maturation antigen (BCMA),

and (ii) a pharmaceutically acceptable carrier, wherein the antibody or antigen binding fragment thereof, comprises: a heavy chain variable region comprising a CDR1 comprising SEQ ID NO: 1, a CDR2 comprising SEQ ID NO: 2, and a CDR3 comprising SEQ ID NO: 3, and a light chain variable domain comprising a CDR1 comprising SEQ ID NO: 5, a CDR2 comprising SEQ ID NO: 6, and a CDR3 comprising SEQ ID NO: 7; and optionally

(b) instructions for performing a method of any one of claims 1-119.

121. The kit of claim 120, wherein the kit further comprises one or more doses of dexamethasone, one or more doses of an immunomodulatory imide drug, one or more doses of a gamma-secretase inhibitor, and/or one or more doses of an anti-CD38 antibody or antigen-binding fragment thereof.

122. The kit of claim 121, wherein the kit further comprises one or more doses of dexamethasone.

123. The kit of claim 121, wherein the kit further comprises one or more doses of an immunomodulatory imide drug.

124. The kit of claim 121, wherein the kit further comprises one or more doses of dexamethasone and one or more doses of an immunomodulatory imide drug.

125. The kit of claim 121, wherein the kit further comprises one or more doses of a gamma-secretase inhibitor.

126. The kit of claim 121, wherein the kit further comprises one or more doses of an anti-CD38 antibody.