WHAT IS CLAIMED IS:

1. An antibody that binds to proprotein convertase subtilisin/kexin type 9 (PCSK9), wherein the antibody:

a) does not block PCSK9 binding to the low density lipoprotein receptor (LDLR) and

b) inhibits PCSK9-mediated degradation of LDLR.

2. The antibody of claim 1, wherein the antibody binds to at least one amino acid within residue positions 680-692 of human PCSK9.

3. The antibody of claim 1, wherein the antibody binds to human PCSK9 with an equilibrium dissociation constant (K_D) of about 500 pM or less.

4. The antibody of claim 1, wherein the antibody has an *in vivo* half-life of at least 7 days.

5. The antibody of claim 1, wherein the antibody comprises

(a) a heavy chain variable region comprising a human heavy chain V-segment, a heavy chain complementarity determining region 3 (CDR3), and a heavy chain framework region 4 (FR4), and

(b) a light chain variable region comprising a human light chain V-segment, a light chain CDR3, and a light chain FR4, wherein

i) the heavy chain CDR3 comprises the amino acid sequence SYYYY(A/N)MD(A/F/S/V/Y) (SEQ ID NO:14); and

ii) the light chain CDR3 variable region comprises the amino acid sequence LQWSSDPPT (SEQ ID NO:26).

6. The antibody of claim 5, wherein the heavy chain V-segment has at least 85% sequence identity to SEQ ID NO:28, and wherein the light chain V-segment has at least 85% sequence identity to SEQ ID NO:31.

7. The antibody of claim 5, wherein the heavy chain V-segment has at least 85% sequence identity to SEQ ID NO:27, and wherein the light chain V segment has at least 85% sequence identity to the amino acid selected from the group consisting of SEQ ID NO:29 and SEQ ID NO:30.

8. The antibody of claim 5, wherein:

i) the heavy chain CDR3 comprises the amino acid sequence selected from the group consisting of SEQ ID NO:12 and SEQ ID NO:13; and

ii) the light chain CDR3 comprises the amino acid sequence of SEQ ID NO:26.

9. The antibody of claim 5, wherein the heavy chain FR4 is a human germline FR4.

10. The antibody of claim 9, wherein the heavy chain FR4 is SEQ ID NO:35.

11. The antibody of claim 5, wherein the light chain FR4 is a human germline FR4.

12. The antibody of claim 11, wherein the light chain FR4 is SEQ ID NO:39.

13. The antibody of claim 5, wherein the heavy chain V-segment and the light chain V-segment each comprise a complementarity determining region 1 (CDR1) and a complementarity determining region 2 (CDR2); wherein:

i) the CDR1 of the heavy chain V-segment comprises the amino acid sequence of SEQ ID NO:8;

ii) the CDR2 of the heavy chain V-segment comprises the amino acid sequence of SEQ ID NO:11;

iii) the CDR1 of the light chain V-segment comprises the amino acid sequence of SEQ ID NO:22; and

iv) the CDR2 of the light chain V-segment comprises the amino acid sequence of SEQ ID NO:25.

14. The antibody of claim 13, wherein

i) the CDR1 of the heavy chain V-segment comprises SEQ ID NO:7;

ii) the CDR2 of the heavy chain V-segment comprises SEQ ID NO:10;

iii) the heavy chain CDR3 comprises the amino acid sequence selected from the group consisting of SEQ ID NO:12 and SEQ ID NO:13;

iv) the CDR1 of the light chain V-segment comprises SEQ ID NO:21;

v) the CDR2 of the light chain V-segment comprises SEQ ID NO:24; and

vi) the light chain CDR3 comprises SEQ ID NO:26.

15. The antibody of claim 5, wherein the heavy chain variable region has at least 90% amino acid sequence identity to the variable region of SEQ ID NO:40 and the light chain variable region has at least 90% amino acid sequence identity to the variable region of SEQ ID NO:41.

16. The antibody of claim 5, wherein the heavy chain variable region has at least 95% amino acid sequence identity to the variable region of SEQ ID NO:40 and the light chain variable region has at least 95% amino acid sequence identity to the variable region of SEQ ID NO:41.

17. The antibody of claim 5, wherein the antibody comprises a heavy chain comprising SEQ ID NO:40 and a light chain comprising SEQ ID NO:41.

18. The antibody of claim 5, wherein the heavy chain variable region has at least 90% amino acid sequence identity to the variable region selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4 and the light chain variable region has at least 90% amino acid sequence identity to the variable region selected from the group consisting of SEQ ID NO:16 and SEQ ID NO:18.

19. The antibody of claim 5, wherein the heavy chain variable region has at least 95% amino acid sequence identity to the variable region selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4 and the light chain variable region has at least 95% amino acid sequence identity to the variable region selected from the group consisting of SEQ ID NO:16 and SEQ ID NO:18.

20. The antibody of claim 5, wherein the heavy chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4 and the light chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:16 and SEQ ID NO:18.

21. The antibody of claim 1, wherein the antibody is a FAb' fragment.

22. The antibody of claim 1, wherein the antibody is an IgG.

23. The antibody of claim 1, wherein the antibody is a single chain antibody (scFv).

24. The antibody of claim 1, wherein the antibody comprises human constant regions.

25. The antibody of claim 1, wherein the antibody is linked to a carrier protein.

26. The antibody of claim 1, wherein the antibody is PEGylated.

27. An antibody that specifically binds PCSK9, wherein the antibody comprises a heavy chain variable region and a light chain variable region, wherein the heavy chain variable region and the light chain variable region each comprise the following three complementarity determining regions (CDRs): CDR1, CDR2 and CDR3; wherein:

i) the CDR1 of the heavy chain variable region comprises the amino acid sequence of SEQ ID NO:8;

ii) the CDR2 of the heavy chain variable region comprises the amino acid sequence of SEQ ID NO:11;

iii) the CDR3 of the heavy chain variable region comprises the amino acid sequence of SEQ ID NO:14;

iv) the CDR1 of the light chain variable region comprises the amino acid sequence of SEQ ID NO:22;

v) the CDR2 of the light chain variable region comprises the amino acid sequence of SEQ ID NO:25;

vi) the CDR3 of the light chain variable region comprises the amino acid sequence of SEQ ID NO:26.

28. The antibody of claim 27, wherein:

i) the CDR1 of the heavy chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:6 and SEQ ID NO:7;

ii) the CDR2 of the heavy chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:9 and SEQ ID NO:10;

iii) the CDR3 of the heavy chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:12 and SEQ ID NO:13;

iv) the CDR1 of the light chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:20 and SEQ ID NO:21;

v) the CDR2 of the light chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:23 and SEQ ID NO:24;

vi) the CDR3 of the light chain variable region comprises the amino acid sequence of SEQ ID NO:26.

29. A composition comprising an antibody of claim 1 and a physiologically compatible excipient.

30. The composition of claim 29, wherein the composition further comprises a second agent that reduces low density lipoprotein cholesterol (LDL-C) levels in an individual.

31. The composition of claim 30, wherein the second agent is a statin.

32. The composition of claim 31, wherein the statin is selected from the group consisting of atorvastatin, cerivastatin, fluvastatin, lovastatin, mevastatin, pitavastatin, pravastatin, rosuvastatin, and simvastatin.

33. The composition of claim 30, wherein the second agent is selected from the group consisting of fibrates, niacin and analogs thereof, cholesterol absorption inhibitors, bile acid sequestrants, thyroid hormone mimetics, a microsomal triglyceride transfer protein (MTP) inhibitor, a diacylglycerol acyltransferase (DGAT) inhibitor, an inhibitory nucleic acid targeting PCSK9 and an inhibitory nucleic acid targeting apoB100.

34. A method of reducing LDL-C in an individual in need thereof, the method comprising administering a therapeutically effective amount of the antibody of claim 1 to the individual, thereby reducing LDL-C in the individual.

35. The method of claim 34, wherein the individual is hyporesponsive or resistant to statin therapy.

36. The method of claim 34, wherein the individual is intolerant to statin therapy.

37. The method of claim 34, wherein the individual has a baseline LDL-C level of at least about 100 mg/dL.

38. The method of claim 34, wherein the individual has familial hypercholesterolemia.

39. The method of claim 34, wherein total cholesterol is reduced with LDL-C.

40. The method of claim 34, wherein the individual has triglyceridemia.

41. The method of claim 34, wherein the individual has a gain-of-function PCSK9 gene mutation.

42. The method of claim 34, wherein the individual has drug-induced dyslipidemia.

43. The method of claim 34, further comprising administering a therapeutically effective amount of a second agent effective in reducing LDL-C to the individual.

44. The method of claim 43, wherein the second agent is a statin.

45. The method of claim 44, wherein the statin is selected from the group consisting of atorvastatin, cerivastatin, fluvastatin, lovastatin, mevastatin, pitavastatin, pravastatin, rosuvastatin, and simvastatin.

46. The method of claim 43, wherein the second agent is selected from the group consisting of fibrates, niacin and analogs thereof, cholesterol absorption inhibitors, bile acid sequestrants, thyroid hormone mimetics, a microsomal triglyceride transfer protein (MTP) inhibitor, a diacylglycerol acyltransferase (DGAT) inhibitor, an inhibitory nucleic acid targeting PCSK9 and an inhibitory nucleic acid targeting apoB100.

47. The method of claim 43, wherein the antibody and the second agent are co-administered as a mixture.

48. The method of claim 43, wherein the antibody and the second agent are co-administered separately.

49. The method of claim 34, wherein the antibody is administered intravenously.

50. The method of claim 34, wherein the antibody is administered subcutaneously.

What is claimed is:

1. An antibody that binds to proprotein convertase subtilisin/kexin type 9 (PCSK9), wherein the antibody comprises a heavy chain V-segment and a light chain V-segment, each of which comprises a complementarity determining region 1 (CDR1), a complementarity determining region 2 (CDR2), and a complementarity determining region 3 (CDR3); wherein:

i) the CDR1 of the heavy chain V-segment comprises SEQ ID NO:7;

ii) the CDR2 of the heavy chain V-segment comprises SEQ ID NO:10;

iii) the heavy chain CDR3 comprises an amino acid sequence selected from the group consisting of SEQ ID NO:12 and SEQ ID NO:13;

iv) the CDR1 of the light chain V-segment comprises SEQ ID NO:21;

v) the CDR2 of the light chain V-segment comprises SEQ ID NO:24; and

vi) the light chain CDR3 comprises SEQ ID NO:26.

2. The antibody of claim **1**, wherein the heavy chain variable region has at least 90% amino acid sequence identity to the variable region of SEQ ID NO:40 and the light chain variable region has at least 90% amino acid sequence identity to the variable region of SEQ ID NO:41.

3. The antibody of claim **1**, wherein the heavy chain variable region has at least 95% amino acid sequence identity to the variable region of SEQ ID NO:40 and the light chain variable region has at least 95% amino acid sequence identity to the variable region of SEQ ID NO:41.

4. The antibody of claim **1**, wherein the antibody comprises a heavy chain comprising SEQ ID NO:40 and a light chain comprising SEQ ID NO:41.

5. The antibody of claim **1**, wherein the heavy chain variable region has at least 90% amino acid sequence identity to the variable region selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4 and the light chain variable region has at least 90% amino acid sequence identity to the variable region selected from the group consisting of SEQ ID NO:16 and SEQ ID NO:18.

6. The antibody of claim **1**, wherein the heavy chain variable region has at least 95% amino acid sequence identity to the variable region selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4 and the light chain variable region has at least 95% amino acid sequence identity to the variable region selected from the group consisting of SEQ ID NO:16 and SEQ ID NO:18.

7. The antibody of claim **1**, wherein the heavy chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4 and

the light chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:16 and SEQ ID NO:18.

8. The antibody of claim **1**, wherein the antibody is a FAb' fragment.

9. The antibody of claim **1**, wherein the antibody is an IgG.

10. The antibody of claim **1**, wherein the antibody is a single chain antibody (scFv).

11. The antibody of claim **1**, wherein the antibody comprises human constant regions.

12. The antibody of claim **1**, wherein the antibody is linked to a carrier protein.

13. The antibody of claim **1**, wherein the antibody is PEGylated.

14. An antibody that specifically binds PCSK9, wherein the antibody comprises a heavy chain variable region and a light chain variable region, wherein the heavy chain variable region and the light chain variable region each comprise the following three complementarity determining regions (CDRs): CDR1, CDR2 and CDR3; wherein:

i) the CDR1 of the heavy chain variable region comprises the amino acid sequence of SEQ ID NO:8;

ii) the CDR2 of the heavy chain variable region comprises the amino acid sequence of SEQ ID NO:11;

iii) the CDR3 of the heavy chain variable region comprises the amino acid sequence of SEQ ID NO:14;

iv) the CDR1 of the light chain variable region comprises the amino acid sequence of SEQ ID NO:22;

v) the CDR2 of the light chain variable region comprises the amino acid sequence of SEQ ID NO:25;

vi) the CDR3 of the light chain variable region comprises the amino acid sequence of SEQ ID NO:26.

15. An antibody that specifically binds PCSK9, wherein the antibody comprises a heavy chain variable region and a light chain variable region, wherein the heavy chain variable region and the light chain variable region each comprise the following three complementarity determining regions (CDRs): CDR1, CDR2 and CDR3, wherein:

i) the CDR1 of the heavy chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:6 and SEQ ID NO:7;

ii) the CDR2 of the heavy chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:9 and SEQ ID NO:10;

iii) the CDR3 of the heavy chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:12 and SEQ ID NO:13;

iv) the CDR1 of the light chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:20 and SEQ ID NO:21;

v) the CDR2 of the light chain variable region comprises the amino acid sequence selected from the group consisting of SEQ ID NO:23 and SEQ ID NO:24;

vi) the CDR3 of the light chain variable region comprises the amino acid sequence of SEQ ID NO:26.

16. A composition comprising an antibody of claim **1** and a physiologically compatible excipient.

17. The composition of claim **16**, wherein the composition further comprises a second agent that reduces low density lipoprotein cholesterol (LDL-C) levels in an individual.

18. The composition of claim **17**, wherein the second agent is a statin.

19. The composition of claim **18**, wherein the statin is selected from the group consisting of atorvastatin, cerivastatin, fluvastatin, lovastatin, mevastatin, pitavastatin, pravastatin, rosuvastatin, and simvastatin.

20. The composition of claim **17**, wherein the second agent is selected from the group consisting of fibrates, niacin and analogs thereof, cholesterol absorption inhibitors, bile acid sequestrants, thyroid hormone mimetics, a microsomal triglyceride transfer protein (MTP) inhibitor, a diacylglycerol acyltransferase (DGAT) inhibitor, an inhibitory nucleic acid targeting PCSK9 and an inhibitory nucleic acid targeting apoB100.

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